Wichita Area Metropolitan Planning Organization

Regional Pathway System Plan Update

December 2011

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Credits

We would like to extend our greatest appreciation to those who have contributed to this document including the following staff, committees, and groups:

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Citizen Advocacy Groups (2007)

Oz Bicycle Club
Prairie Travelers
Derby Running Club
Run Wichita
Kansas Singletrack
Sierra Club
Greenway Alliance
North Riverside Neighborhood Association

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City of Kechi
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City of Eastborough
City of Viola
City of Haysville
City of Derby
Unified School Districts #259, #266 and #260
City of Mount Hope
City of Andale
City of Colwich
City of Maize
City of Bentley
City of Sedgwick
City of Valley Center
City of Andover
City of Goddard
City of Garden Plain
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Purpose of this Study

The WAMPO Regional Pathway System Plan (RPSP) establishes a backbone system to connect existing and future bicycle/pedestrian facilities throughout the metropolitan planning area. The plan was originally developed in 2007 as a cooperative effort that included extensive participation by various stakeholders including the Wichita Area Metropolitan Planning Organization (WAMPO), federal, state, and transit agency representatives, pathway users, and local jurisdictions throughout the region. It was revised in 2011 to reflect changes made to the system between 2007 and 2011, including updates made to the WAMPO Metropolitan Transportation Plan (MTP) 2035, and to include a section on emerging opportunities and issues in the region.

The principal function of WAMPO is to serve as a regional forum for transportation decision-making. Therefore, the key function of this plan is to serve as a decision-making tool. It is not the intent of this plan to be prescriptive in policy recommendations or facility decisions. Rather, decisions that impact development policy, facility type, and facility location are left to the discretion of local jurisdictions as they attempt to do what is in the best interest of their communities. This plan does, however, identify opportunities to serve the current and future transportation needs of the region.

The plan attempts to address irreconcilable views on bicycle/pedestrian facility development and use that exist in the general public. However, this plan will not satisfy all viewpoints. Due to the nature of the plan, trail users provided the vast majority of input. As such, WAMPO acknowledges that the plan more thoroughly addresses the needs and viewpoints of facility users than those of non-users.

The Plan incorporates current and previous plans by individual jurisdictions with new regional, system-level pathway planning approaches. Specifically, this document addresses the following:

- How can we effectively address bicycling and walking needs across a 1,050 square mile region?
- Do bicycles belong on streets with cars or off the roadways, on sidewalks and trails with pedestrians?
- Is this plan addressing transportation or recreation needs?
- Do trails, bicycle lanes and rural roadways all provide transportation options? How can they be combined to create a seamless, regional network of bicycle travel options?
- What types of public infrastructure and private land use improvements will enhance pedestrian travel opportunities?
- How can site-specific projects and local-level planning efforts be incorporated into the regional system?
- What else is needed in addition to building new facilities?

- How does this plan relate to the updated WAMPO Metropolitan Transportation Plan (MTP) 2035?
- What performance measures will be used to gauge the effectiveness of strategies and activities identified in the WAMPO MTP 2035?
- What are emerging issues and considerations facing the region?
- Where do we start?

Status Snapshot of Pathway Development in the WAMPO Region

	Existing Miles of Pathway Facilities In Region	Additional Miles Proposed In Existing Local Plans	Consultant Recommendations per Regional Plan	Opportunities for Flexibility through Local Implementation
Off-Road Multi-Use Paths	109	461	164	178 - 228
On-Street Bicycle Lanes	8	0	67	5 - 40
Paved Shoulders	35	0	129	114 - 129

This plan's proposed system of primary corridors tried to balance the ability of the region to construct new miles of off-road trails with the need for bicycle accommodation on area streets and roadways. By incorporating on-street bicycle facilities, the system may better serve regional travel needs and a basic system may be able to be completed more cost-effectively.

This plan is tailored to answer these questions and meet the needs of the WAMPO region for creating connectivity, optimizing safety, and encouraging bicycling and walking to local and regional destinations.

The Regional Pathway System Plan update is intended to be adopted by the WAMPO Transportation Policy Body, but will need the ongoing support of the 24 local jurisdictions to move forward with the implementation of its recommendations. The regional approach provides a framework for identifying locations where major pathway improvements are appropriate and should be prioritized for implementation by one or more jurisdictions. Local buy-in will determine which projects move forward when, and local communities will need to address site-specific design and implementation details.

Key observations of existing conditions in the WAMPO region and recommendations for enhanced bicycling and walking opportunities include the following:

Regional Development Patterns

- The majority of facilities built to date have all been off-road pathways with little attention paid to the accommodation of bicyclists on area streets.
- Sidewalks are provided on at least one side of most arterial streets; however, sidewalk accommodation is lacking on many local streets.
- Growth patterns in this area have created a transportation network including only major arterial corridors, local streets and cul-de-sacs. In most parts of the WAMPO region, connector or collector streets are missing from the network. This emphasis solely on regional vehicular mobility makes bicycle travel very difficult, and limits circulation and access for motorists.
- Major geographical barriers exist throughout the region. Rivers, railroads and numerous expressway corridors require expensive grade-separated crossings for bicyclists and pedestrians. At-grade crossings on major arterial streets are difficult for all modes to cross due to multiple lanes of fast-moving traffic and infrequent spacing of traffic signals.
- Political barriers are also an issue in this region. Pathway projects can only move forward with local support and buy-in. Unfortunately, many residents of the region view bicycling and walking as special interest recreational activities and do not yet recognize the value of fully incorporating facilities for these activities into transportation infrastructure.

Network Connectivity

- Individual pieces of pathway have been built across the region, but they are not connected to form a system or network that people can use to travel from place to place.
- The easy pieces of trails have been built. Now the region and its municipalities need to prioritize missing gaps in the off-road trail network and focus on using the roadway network to create an interconnected system that links to regional destinations.
- For bicycling and walking to be effective, the network needs to be fine-grained. This means designated north/south corridors need to be spaced periodically and connected with frequent east/west corridors to provide people with travel options between various origins and destinations. Focusing on one facility as a region-wide solution won't work.
- Facilities in the network may be of various types (multi-use paths, on-street bicycle lanes, paved shoulders, etc.) but need seamless connections between segments to facilitate cross-town travel.
- The network should have facilities spaced more closely in areas with a higher population density, more potential destinations, and shorter trip distances. Getting

pathway users into and through Downtown Wichita on designated facilities and linking various parts of the region with its center should be a high priority.

- Emphasis needs to be placed on creating a primary system of longer pathway corridors. Once this system is in place, shorter secondary corridors and local projects can connect into the system and increase its effectiveness.
- Approximately 65 miles of priority missing links (17 projects) have been identified for immediate implementation to complete an initial system of primary corridors.

Implementation

- To move forward, the WAMPO Regional Pathway System Plan requires plan ownership and support, interagency coordination and local-level implementation of the recommended projects.
- Relying solely on federal grants to fully fund the bicycle/pedestrian transportation system is unrealistic. Many projects can and should be completed as incidental parts of larger roadway improvement projects.
- Several streets in the region have been over-designed to carry more vehicle trips than what is necessary or appropriate. Retrofitting these corridors by restriping multi-lane streets to include bicycle lanes is a cost effective and successful way to create a fine-grained pathway network. Minor arterials with moderate traffic volumes are logical street candidates for such "road diet" lane restriping.
- The miles of new off-road pathways suggested in local plans far exceed the region's funding capabilities. Regional priorities should initially focus on those corridors that complete missing gaps in the system.
- Other large projects, particularly those following waterways, should remain part of the long-term vision for the pathway system, but will require significant changes in growth patterns and development policies across multiple jurisdictions before they can become a reality.
- Additional smaller steps such as education, encouragement, mapping, facility maintenance, and enhanced intersection improvements can and should be undertaken immediately to improve bicycling and walking conditions throughout the WAMPO region.
- Maintenance of facilities is another key issue. Generally speaking, the funding sources available to WAMPO do not allow for project maintenance costs, only project development. Adequate funding for the maintenance of pathway facilities should be fully considered and programmed by each jurisdiction as projects are proposed and developed.

Background on Why This Plan was Developed

Federal statutes require urbanized areas to include bicycling and walking components in their long-range transportation plans. In addition to transportation benefits, the WAMPO region recognizes the economic and quality of life benefits that pathways bring to communities and their residents.

SAFETEA-LU

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period from 2005-2009. It has been extended into 2012 when a new transportation bill is authorized.

In accordance with SAFETEA-LU requirements, states are required to designate a Metropolitan Planning Organization (MPO) to develop transportation plans and programs for urbanized areas with more than 50,000 individuals. The planning process shall provide for all modes of transportation and shall be continuing, cooperative, and comprehensive to the degree appropriate based on the complexity of transportation problems.

Inventory of Existing Facilities

For this task we collected all available planning work to date on greenways, trails, bicycle facilities, and sidewalks from the 21 cities and three counties within the MPO planning area. This includes existing, planned, and soon to be completed facilities.

Public Participation and Community Outreach

We view development of any local bicycle/pedestrian/trail plan as a joint venture with the local jurisdiction(s) and its citizens. For this reason, we carefully structured early and interactive public involvement as a key component of our planning process.

Implementation Plan

Three basic categories of regional needs were identified during the development of the WAMPO Metropolitan Transportation Plan (MTP) 2035:

1) Filling in gaps between existing pathway segments;
2) Making land use connections; and
3) Targeting opportunities.

To reach these goals, the implementation plan includes the following sub-categories:

Bicycle System Planning

A planning approach to create bicycling corridors at least 5 miles in length that link destinations and serve population centers.

Implementation Strategies

Includes big ideas to carry out the long-term vision and small, first steps to realize its implementation.

Pedestrian Guidelines

Supplemental guidance that moves beyond pathway corridors and addresses the pedestrian-friendliness of street rights-of-way and adjacent land uses.

The Wichita Area Metropolitan Planning Organization

The growing Wichita area economy combined with prolonged periods of growth has resulted in extraordinary demands on the region's surface transportation system. Reducing traffic congestion, improving air quality, and finding ways to fund and implement alternative modes of travel are issues that extend well beyond traditional local government boundaries.

Multimodal transportation planning facilitated through a single policy direction for all modes of travel ensures that plans, programs, and policies are coordinated across various city, county, and agency service areas as well as jurisdictional boundaries, and that coordination is occurring among implementing agencies.

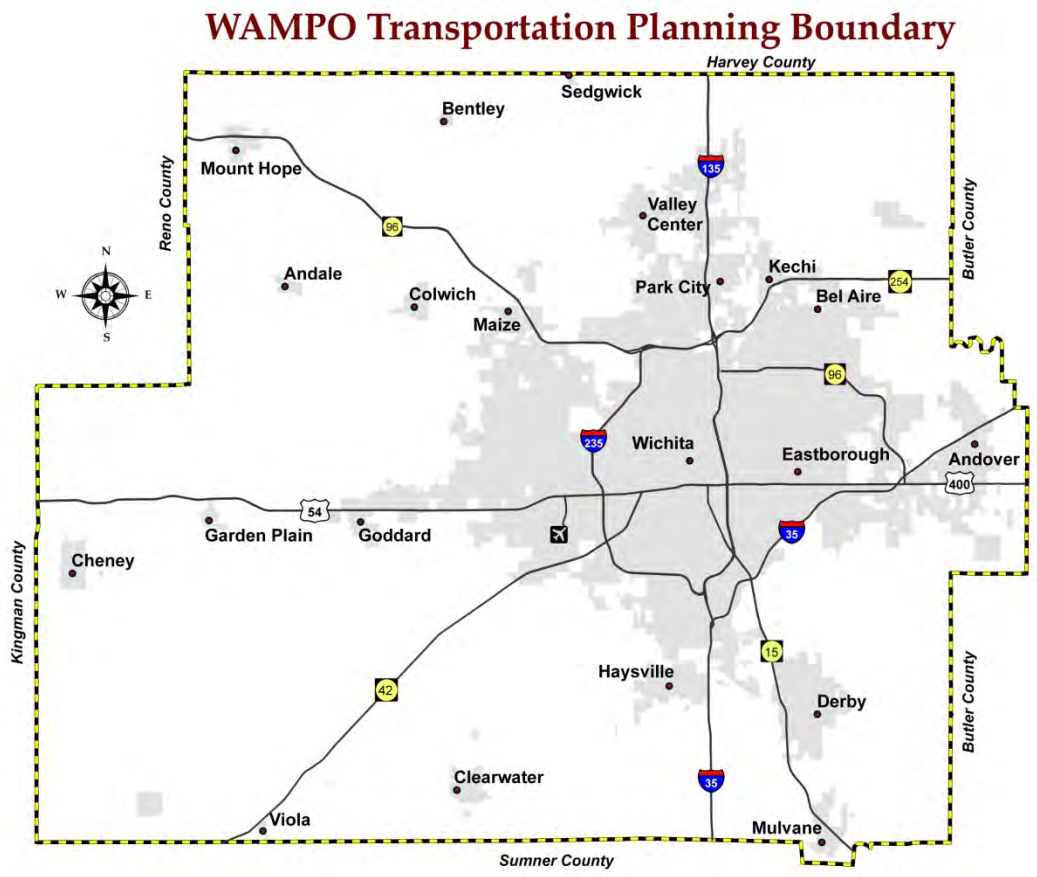
In the Wichita area, this direction is provided through a collaborative structure of committees and organizations creating partnerships in regional transportation planning and implementation. Our region's MPO was established in 1974, and reorganized and renamed as the Wichita Area Metropolitan Planning Organization (WAMPO) in 2007. WAMPO serves the region by developing transportation plans and programs that address the complex transportation needs of our rapidly growing metropolitan area.

What is an MPO?

A Metropolitan Planning Organization (MPO) is an organization of local governments in areas with a collective population of 50,000 or more, called an Urbanized Area. As a condition for receiving federal transportation dollars, MPOs shall cooperate with the state, Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) developing transportation plans and programs for urbanized areas. This transportation planning process results in plans and programs consistent with the area's locally adopted comprehensive plans.

The regional planning process includes making informed predictions about future transportation needs, investigating and assessing alternative actions for meeting those needs, and making recommendations about which course of action to pursue. The information generated by this process is used by decision-makers to select transportation policies and programs from the choice of alternatives.

The WAMPO MPO serves the region consisting of 21 cities and three counties in south central Kansas. The WAMPO Transportation Planning Boundary identified on the following page consists of all of Sedgwick County, and the cities and towns within; portions of Butler County around and including the city of Andover; and a portion of Sumner County around and including the City of Mulvane.



Map Depicting the WAMPO Planning Area and Member Communities

Regional Pathway System Plan

The following summarizes the key aspects of this project:

- The geographic area of WAMPO encompasses 1,050 square miles and 24 local jurisdictions, including 21 cities and portions of three counties. This planning process was designed to further the collection and assimilation of data into a single source for future development of local plans and policies by the affected jurisdictions.
- Previous non-motorized efforts in the region have focused on recreational trail development. This project continued this work and expanded upon it to include bicycling and walking to work, commercial centers, and activity centers.
- The 2030 WAMPO Long Range Transportation Plan (LRTP) established a sound planning foundation based on the region's economic, social, land use and transportation conditions, and received extensive citizen input into goals and desired improvements. This project built on that foundation. This same effort is reflected in the Metropolitan Transportation Plan 2035, the current update to the 2030 LRTP. Tenets of the MTP 2035 have been incorporated into Chapter 3 of this document.

- Based upon previous park planning efforts, recreational facilities are desired to be provided at a minimum rate of 1 trail mile per 5,000 populations. It is estimated to take 85 years to complete building approximately 400 miles of proposed trails at current funding levels of 4.1 miles per year.
- Additional funding mechanisms are desired to supplement Transportation Enhancement Funds to help meet identified needs, and a prioritization method is needed to determine where expenditures should be strategically spent on future projects.
- In addition to recreational trails, several other facilities have been included in this Regional Pathway System Plan, including off-road multi-use paths, signed bicycle routes, bike lanes, paved roadway shoulders, and sidewalks.
- The end mapping and database product was intended to be used as a planning tool at both the local and regional levels. The plan maps therefore include all existing and planned facilities in the region, overlaid with a regional priority network.
- Guidelines were desired to be developed by the MPO, working in conjunction with the local communities, which can be used to guide local development processes, prioritize enhancement project applications, and connect the gaps in the existing system. Providing a mechanism for regional coordination was the overall project goal.

Regional Goal

"To create a strategic plan that ensures a quality of life and encourages our young people to live, learn, work, and play in our regional community."
--Visioneering Wichita, December 2004

The Benefits of Pathways

Visioneering Wichita was a major study examining issues and trends affecting the Wichita Metropolitan Statistical Area (MSA) that includes Sedgwick, Butler, Harvey, and Sumner Counties, as well as their communities. This regional vision incorporates the ideas of more than 8,650 residents representing all of the communities and counties in the MSA region.

The Visioneering Wichita planning effort focused on understanding and addressing the following issues:

1. Regional Growth and Development;
2. Retaining Young People;
3. Job Growth;
4. Income Growth;
5. Education;

6. Family Stability;
7. Downtown Development;
8. Arts/Recreation ;
9. Racial Diversity, Opportunity, and Harmony; and
10. Leadership

Development of a Regional Pathway System can be a major step in realizing many of these goals, particularly as related to job retention in a society that values and responds to "The New Economy" and a "Creative Class" of workers. Today's companies and individuals are free to locate to regions where quality of life, recreational amenities, personal mobility, and sense of place become key location factors, as described following.

Big 'Creative Class' Helps a City Thrive

"Because companies go where they can tap such workers, the people charged with revitalizing cities need to focus less on chasing big companies and more on growing communities where creative types prosper, the theory goes. Think bike trails, parks, good architecture, and a lively arts scene. Companies and jobs will follow pools of highly skilled workers. It's about clustering people, Florida preaches, not companies."
-- Pioneer Press, St. Paul, MN

The New Economy

In the mass-production economy, people had to go to a work site to work because they had to access equipment kept in a central place. In the New Economy, the means of production is the personal computer which has begun to make the need for distinct and separate workplaces obsolete. With the increasing numbers of home-based businesses and telecommuters we are able to shape work to suit the way we live rather than shaping our lives to fit our work.

Successful "economic communities" are places with strong, responsive relationships between the economy and the community that provide companies and communities with sustained advantage and resilience.

The New Economy & Creative Workers

"Companies that can locate anywhere will go where they can attract good people in a good place."
--Intel spokesperson

"Keep your tax incentives and highway interchanges; we will go where the highly skilled people are."
--Former CEO of Hewlett Packard

Companies increasingly move to, start up, and grow where the talent for the New Economy wants to live. Research shows that quality of life is an especially important screening factor for firms in technology businesses or that employ highly skilled workers in knowledge-based service and production.

The Creative Class

Today, a significant demographic realignment is under way: the mass relocation of highly skilled, highly educated, and highly paid Americans to a relatively small number of

metropolitan regions, and a corresponding exodus of the traditional lower and middle classes from these same places.

It used to be thought that for regions and nations to grow all that was required was to influence business location decisions. Those days are over. Today we know that in order to grow and prosper, communities and regions need to do much more. Communities with natural amenities and a high quality of life draw a higher percentage of creative workers, according to major research work by Richard Florida.

Economic Development

As a part of the public outreach and education for the WAMPO Pathways Plan, we held a special meeting with representatives of Visioneering Wichita and the Chamber of Commerce to discuss creating opportunities for bicycling and walking for transportation and recreation.

Why? Communities that provide multi-modal transportation systems and a variety of close-to-home recreation opportunities offer residents and employees a higher quality of life. Places ranking among the top tier of innovative regions are concerned about the sustainability of their success and are realizing the importance of quality of life as an asset.

Skilled workers and entrepreneurs choose to live in places that offer attractive career opportunities, an attractive lifestyle, and high overall community quality of life.

Developing a sense of place within a community, creating places for active living, and enhancing property values through natural and built environments contribute to the economic vitality of a healthy community.

Inventory of Existing Facilities

This task involved collecting all available planning work to date on greenways, trails, bicycle facilities, and sidewalks from the 24 jurisdictions within the MPO planning area. This included existing, planned, and soon to be completed facilities.

The following plans were reviewed for incorporation into this project:

Old Bikeway Maps (1970s)
These maps identified meandering Bike Routes along low-volume local streets. We referenced these routes when looking at necessary connections between facilities, but this planning effort focused on improving direct routes that serve regional destinations.

Wichita Metropolitan Area Comprehensive Bicycle Plan (1989)
This plan took a "4-E" approach to making recommendations for enforcement, education, encouragement, and engineering. Most of the physical engineering recommendations of this plan have been implemented, with five missing pathway segments yet to be constructed.

Parks and Pathways: Park and Open Space Master Plan, Wichita-Sedgwick County (1996)
Primarily recreational in nature, this plan focused on off-road trail opportunities to connect a variety of public and private open spaces. The goal was for 99% of the City of Wichita's population to reside within one mile of a trail or pathway. The plan included proposed trails along of a number of waterways both within the City of Wichita and continuing on into Sedgwick County.

WAMPO Metropolitan Transportation Plan 2035 (2010)
The MTP 2035 sets the goals and objectives for the regional transportation system in 2035, and it also includes recommendations, strategies, and projects to help the region achieve the overall MTP 2035 vision of a safe, affordable, accessible, and efficient transportation system. MTP 2035 recommendations on how to improve the regional pathways system include filling physical gaps in the system, increasing connections, improving safety, making land use connections, and targeting opportunities. Our approach is the same, filling in the details for how to make the broad MTP 2035 vision happen.

Various local bikeway and pathway project proposals (2006, Updated in 2011)
Collected from all of the jurisdictions within the WAMPO boundaries, these have been added to the pathways mapping database and will become part of the Primary and Secondary corridors analysis. Individual plans include:

- City of Wichita, Transportation Enhancement Bike Path Proposals (2004-2007)
- City of Wichita, Proposed Transportation Enhancement Projects for FY 2008
- City of Wichita Public Works Department – Traffic Engineering Department, Traffic Flow Map (2006)
- Wichita Pathways and Plats Report (November 2005)
- City of Wichita, 21st Street North Corridor Revitalization Plan (December 2004)
- City of Wichita, Park Recreation Open Space Plan (August 2008)
- City of Wichita 2030 Wichita Functional Land Use Guide
- WAMPO Transportation Improvement Program (2006)
- Wichita Metropolitan Area Bike Path Map
- Wichita-Valley Center Floodway (Big Ditch) Access Analysis (June 1993)
- City of Andover Resolution of Street Policy (2004)
- City of Valley Center Linear Trail System Map and Bike Plan (2004)
- City of Derby Bicycle and Pedestrian Path Map (1999)
- City of Derby Pedestrian and Bike Path Map (2006)
- City of Andover Park System and Open Space Master Plan Map 2003-2013 (2004)
- City of Mulvane Rock Road Path Plan
- City of Cheney Sidewalk and Path Map (2006)
- City of Haysville Hike & Bike Trail Map

Recommended bicycling routes (2006, Updated in 2011)
Referenced a variety of recommended bike routes as found in the Kansas DOT Bicycle Guide, mapped by the Oz Bicycle Club, and identified by the Regional Pathways System Plan Project Advisory Group. Changes, additions, and deletions to bicycle routes originally

identified in 2006 will be considered as emerging issues and deliberated during the full update to the plan in 2013.

All of these resources were overlaid to examine similarities in route preferences and combined with field work to determine needs and opportunities for targeted infrastructure improvements.

Public Participation and Community Outreach

Task1 through Task 5 were developed during public participation and community outreach efforts in 2007. Task 6 was added during the 2011 update.

Task I included on-site meetings and ongoing coordination with WAMPO staff and a core group of State and Federal agency representatives.

A project website (**www.wampopathways.org)** was created and is an available resource to inform and educate the public on topics and events related to or involving the Regional Pathway System Plan. By providing project updates, minutes of previous meetings and presentations, and notifying the public of upcoming events we have been able to inform the community of the project status and direction. Links to related organizations and project resources have helped educate the public as well as staff, committees, and groups throughout the planning process.

Task 2 was an ongoing work phase comprised of several events including Project Advisory Committee (PAC) meetings, public workshops, and special topic stakeholder work sessions which focused on local-level implementation strategies and regional economic development. Key topics included discussion of local capital improvement programs, developer requirements, transportation/land use connections, and the Enhancements program application process.

Two Pathway Users workshops held early in the planning process allowed people representing area bicycle clubs, running groups, commuter cyclists, and neighborhood pathway users to interact with staff by sharing their knowledge of the region and ideas for transportation improvements.

Since the presence of a university in a community is often a major factor contributing to high levels of bicycling and walking, we contacted Wichita State University, Friends

University, and Newman College early in the process for collaboration. However, due to the trip distances of most students attending these schools, there was no interest in working with WAMPO to plan for promoting bicycling and walking to campus.

Task 3 included charette-style work sessions with individual communities to collect data and to learn about their unique pedestrian and bicycle needs. The consultants held meetings to discuss local community projects and plans relating to trails and greenways, Safe Routes to School, bicycle transportation, sidewalks, and street crossings, and supplemented this data collection with field work observations of area trails and streets.

Task 4 input focused on ongoing coordination with the Project Advisory Committee and WAMPO staff to write and revise components of the draft plan. Throughout the course of this planning effort, the consultants and WAMPO staff have also been having one-on-one meetings with citizens and elected officials, as well as staff from the various agencies and departments who will ultimately be responsible for implementing various recommendations of the pathways plan.

Task 5 involved presentations of the draft plan to the Project Advisory Committee, the WAMPO Policy Body, the WAMPO Technical Advisory Committee (TAC) and the general public.

A summary of main comments received on the draft plan and how they have been incorporated into the Final Plan include the following:

- Included mention of consultation with local colleges and universities.
- Added an expanded explanation of the types of bicycle facilities and safety considerations for each. Pros and cons of various facility types are given to assist local communities in making informed decisions for implementation of projects within their jurisdiction.
- Clarified that WAMPO does not have the intent to mandate plan specifics to jurisdictions.
- Clarified that share-the-road signs will be installed in conjunction with future paved shoulder improvements.

- Removed consultant's recommendations for specific types of facility improvements from corridor.
- Clarified that future improvements on 53rd Street North, particularly around the new Wal-Mart site located at Meridian, need to include bicycle accommodation appropriate to the type of growth and development patterns.
- Eliminated portion of Corridor C that suggested on-street bike lanes on 13th N.
- Added request to call the former BNSF line along Corridor D the "Redbud Trail." Received many comments specifically about this rail-banked BNSF corridor as it falls within the City of Wichita jurisdiction. Many were from trail advocates who fully support this project being developed; others were from concerned land owners who do not want to see a trail adjacent to their properties.
- Clarified the history of the Wichita-Valley Center BNSF line.
- Rerouted the central portion of Corridor N off of Oliver onto Edgemoor and Woodlawn Streets.
- Included a section of Corridor D as a priority missing link to connect the Canal Hike and Bike Trail to Oliver through the Ken-Mar Neighborhood, which desires construction of a public-use trail on the former BNSF line as an amenity to improve their neighborhood.
- Received general comments that the implementation recommendations should be stronger. Many people would like to see more definitive action items, but these will need to happen within the individual jurisdictions rather than at the regional level.
- Received questions on the availability of supplemental funding sources, which led to shortening this section.
- Addressed questions on road diets and clarified that pedestrians use sidewalks while cyclists use bicycle lanes. Also moved summary information on research that addresses safety and capacity concerns associated with the road diet treatment to the appendices.
- Clarification of recommended pathway crossing treatments of roadways, and a desire to include orientation signs naming intersecting streets.
- Added new section on bicycle parking.
- Created appendices.

Task 6 incorporates recommendations to include in the 2011 update. These include:

- Connecting the WAMPO Metropolitan Transportation Plan (MTP) 2035.
- Add performance measures to gauge the progress of the plan.
- Add a section identifying emerging issues suggested through public input and PAC recommendations.

Implementation Plan

In summary, this plan is intended to understand the role of the MPO in providing direction for individual communities and agencies to use in implementing projects within their jurisdiction, while valuing the input of the member jurisdictions and agencies in helping to develop MPO policy.
Of the bicycle/pedestrian facility recommendations contained within the MTP 2035, connecting gaps in the system should be the region's top priority. Too often, bicycle/pedestrian/trail plans are completed that depict a number of facilities, but the reality is a disconnected collection of individual projects that does little to serve the travel needs of users.

Bicycle System Planning

For bicycle travel, the region should strive to identify, fund and implement a system of primary bicycling corridors that allow cyclists safe and convenient travel to and from major destinations for distances greater than 2.5 miles (the national average bicycle trip length). Due to land development patterns throughout the WAMPO region, initial primary corridors will be at least 5 miles in length.

Accommodation within the primary corridors may vary from off-road trails to also include segments of on-road bicycle facilities, with seamless transitions provided between facility types. Multi-modal accommodation that includes transit route service and pedestrian supportive land use will also be critical to the goal of increasing bicycling for practical purposes. Completion of a primary system is critical if people are expected to bicycle beyond a recreational ride within or between area parks.

This core bicycle/trail system may be supplemented with a network of secondary corridors that feed into the primary system. Local community plans and the MTP 2035 goal for equitable distribution of trail facilities throughout the region can add to the system. However, it is our experience that the MTP 2035 proposed methodology used alone will not result in an effective regional bicycling system.

Pedestrian Guidelines

For pedestrian facility planning, the WAMPO plan includes guidelines for the location and design of sidewalk facilities and safe roadway crossings in addition to expansion of a pathway system.

The consultants provided guidance for varying levels of pedestrian accommodation based upon context, meaning that recommended facility standards vary between rural, suburban, and urban environments within the region and the desired levels of pedestrian-friendliness.

Implementation Strategies

Finally, for all bicycle and pedestrian facilities to be successful at both the local and the regional level there needs to be a strong grass roots advocacy effort to help support the

funding and implementation. Designating achievable priorities is important to keeping both the advocacy base and local communities engaged over the length of the project. For this reason, the overall goal for this task was to gain consensus on a list of priority projects, with associated cost estimates, that may be realistically funded and implemented by multiple jurisdictions.

Considerations for Bicyclists and Pedestrians

Bicycling and walking are often considered to be special interest recreational activities. However, these modes can also be used for transportation, particularly for short-distance trips. Certain demographics, namely those from low-income households or those too young or too old to drive, rely on non-motorized forms of transportation as their primary means of mobility. Others elect to make daily trips on foot or on bike to incorporate physical activity into their daily routines, or for ecological, environmental, and energy conservation reasons.

While the benefits of bicycling and walking may be similar, the needs and user characteristics of bicyclists and pedestrians differ greatly. By law, bicycles are vehicles and cyclists are considered to be drivers. Bicycles can travel at faster speeds (5-30 mph), cover moderate distances (2.5-mile national average trip length), and require large curve radii for turning movements, gentle grades, and adequate braking distances. Pedestrians, on the other hand, typically travel at slow speeds (2-4 mph), walk short distances (0.25-mile average trip length) and frequently stop, change directions, and laterally shift their path of travel. These differences require that facility planning address each mode separately.

How can we meet the region's bicycling and walking needs?

By focusing on network connectivity to develop a regional system of primary pathway corridors, this plan is designed to meet the adopted goals and objectives of the WAMPO Metropolitan Transportation Plan (MTP) 2035.

Each local jurisdiction shall work to implement their portion of the identified regional system that will provide travel options at least 5 miles in length, connect communities, and provide a backbone system for non-motorized travel.

In addition, to effectively address bicycling and walking needs across the entire 1,050 square mile region, local community pathway, bikeway, and sidewalk systems will need to be developed to feed into the identified regional system.

WAMPO MTP 2035 Bicycle/Pedestrian Recommendations

- **Connectivity of the pathway system.**
- **Safety of users.**
- **Educational efforts.**
- **Maintenance.**
- **Connecting to transit.**
- **Implementing complete streets ideas.**

Activities such as recreational walking, jogging and running may occur on rambling multi-use pathways removed from the street system. However, most walking occurs within street rights-of-way on sidewalks, or on walkways within developments that provide access from vehicular parking to building entrances. Planning for pedestrian travel is thus covered separately in Chapter 6 of this plan.

On-Road or Off-Road Bicycle Accommodation?

Different people have differing viewpoints on where bicyclists should ride. Many motorists believe slower moving bicyclists belong off the roadways. Less experienced cyclists often say that they feel more comfortable riding on trails and sidewalks. Safety experts and

experienced bicyclists disagree, mainly because of the conflicts that can occur between bicyclists and motor vehicles at intersections when bicycles are removed from street travelways and motorist fields of vision. Conflicts between pedestrians and bicyclists can also occur on sidewalks and on narrow pathways when these spaces are shared by both groups.

The planning and design approach undertaken in most communities thus provides multiple options to meet the needs of various users. A bicycle plan does not equal a trails plan, as off-road pathways cannot adequately serve the needs of all bicyclists. Nor will a roadway improvements plan offer the perceived levels comfort and safety desired by those intimidated by riding in traffic. A network plan that provides different facility types for users with different comfort levels and skill sets is thus the recommended planning approach.

Types of Cyclists

It is generally recognized that there are two types of cyclists: Group A: Advanced Bicyclists, and Group B: Basic Bicyclists. There is also a Group C: children, whose needs are similar to the basic bicyclists and thus the two are often classified together as Group B/C (Federal Highway Administration).

Group A: Advanced - Composed of experienced riders who can operate a bicycle under most traffic conditions. This includes bicycle commuters, bike club riders and other cyclists currently following the rules of the road and riding on area streets and roadways with no special accommodations for bicyclists. In most communities, Group A comprises a small segment of the population, but logs in the majority of bicycle miles ridden.

Group B: Basic - Casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles.

Some will develop greater skills and progress to the advanced level, but nationally there will always be millions of basic bicyclists who prefer comfortable access to destinations and well-defined separation of bicycles and motor vehicles.

Group C: Children - Pre-teen cyclists who typically ride close to home under close parental supervision.

Bicycle planning generally promotes a "design cyclist" concept that recognizes and accommodates the needs of both Group A and Group B/C bicyclists.

Group A cyclists are best served by making every street bicycle-friendly by removing hazards and maintaining smooth pavement surfaces. Group B/C riders are best served by providing designated bicycle facilities in key corridors, such as signed and striped bicycle lanes on selected roadways, and off-road trails following waterways and other linear open space corridors.

While sidewalks may be the best choice for the youngest riders, they are not typically considered bicycle facilities in bicycle planning. It is important to recognize that sidewalks are pedestrian spaces, and their presence is not meant to substitute or preclude bicyclist use of streets and roadways.

Rider Group	Preferences	Transportation Improvements
A **Advanced Bicyclists** *Experienced riders who can operate under most traffic conditions.*	• Direct access to destinations • Operate at maximum speed with minimum delays • Sufficient roadway space or shoulder so that bicyclists and motorists can pass without altering their timeline	• Implement traffic calming • Provide wide outside lanes (urban) • Provide usable shoulders (rural)
B **Basic Bicyclists** *Casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles.*	• Comfortable access to destinations • Direct route, but on low-speed, low traffic volume streets or designated bicycle facilities • Well defined separation of bicycle and motor vehicles or separate bike paths	• Traffic calming • Provide network of designated bicycle facilities (lanes, bike paths, bike boulevards) • Usable roadway shoulders
C **Children** *Pre-teen riders whose roadway use is initially monitored by parents.*	• Access to schools, recreation facilities, shopping, or other residential areas • Residential streets with lower motor vehicle speed limits and volumes • Well defined separation of bicycles and motor vehicles or separate bike paths	• Ensure low speeds on neighborhood streets • Traffic calming • Provide network of designated bicycle facilities (lanes, bike paths, bike boulevards) • Useable roadway shoulders

Ideally, all parts of the region should be accessible to all bicyclists, regardless of skill or comfort level. However, throughout the WAMPO region, existing development patterns have created places with varying levels of bicycle-friendliness due to the trip distances required to travel between destinations and the automobile orientation of physical infrastructure provided.

Certain place types (downtowns and school sites, for example) serve as community destinations and should be designed to higher standards to accommodate and encourage access by the broad cross-section of the community represented in the B/C bicycling group. Other places (rural countryside and suburban strip developments) offer intimidating cycling conditions to all but the most experienced Group A riders.

The Need for Network Connectivity

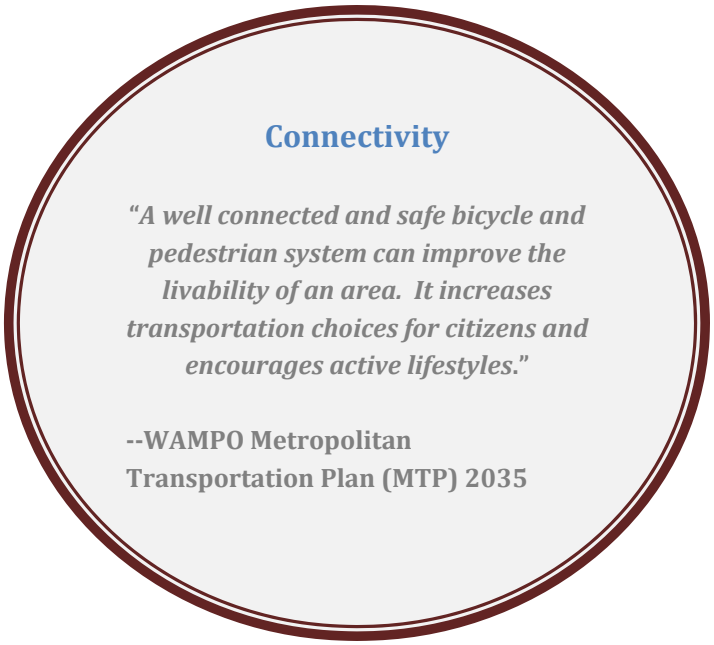
Completing individual pathway projects does not create a bicycle system that works for either Group A or Group B/C bicyclists. The 1994 National Bicycling and Walking Study (NBWS) found that most communities fail to address the major impediments to practical bicycling - distance and safety. This means discontinuities in routes (missing links) and barriers to travel (major street crossings, railroad crossings, river crossings, etc.) need to be addressed. Furthermore, NBWS Case Study No. 1 found that higher levels of bicycle commuting are found in cities where on-road facilities are present.

To overcome distance and safety impediments and provide coverage across the most populated portions of the region, the WAMPO region needs a system that combines on-road and off-road facilities. Due to the large, dispersed metro area, we assume that trips up to 5 miles in length are feasible and necessary to reach destinations. Therefore, continuous routes at least this long that overcome barriers and connect the region's principal origins and destinations must be created.

The WAMPO Regional Pathway Plan distills various facilities planned by the individual jurisdictions into a functional, interconnected system that allows bicycling to become a viable transportation option. As described in detail in Chapter 3, a system of 24 primary regional bicycling corridors should be implemented.

Facilities within the primary corridors should consist primarily of two types: off-road shared-use paths within open space corridors, and signed and striped bicycle lanes on area streets. Over time, secondary corridors will feed into this system. Secondary corridors will be shorter in length to create a finer grid (closer spacing) of bikeway facilities that connect all parts of the local communities with the primary backbone system.

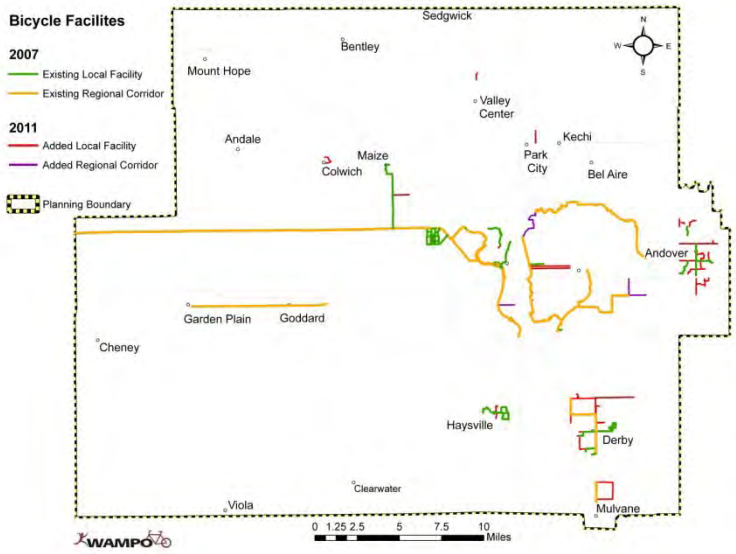
The type of bikeway may vary throughout the length of a given bicycle corridor, but transitions shall be seamless and free of barriers in an effort to provide bicyclists with viable alternatives for cross-town travel. Completing strategic pieces of the primary system should be the highest priority for WAMPO to ensure barrier-free travel options that serve population concentrations and link into and through the region's center and major activity destinations.



The End Result

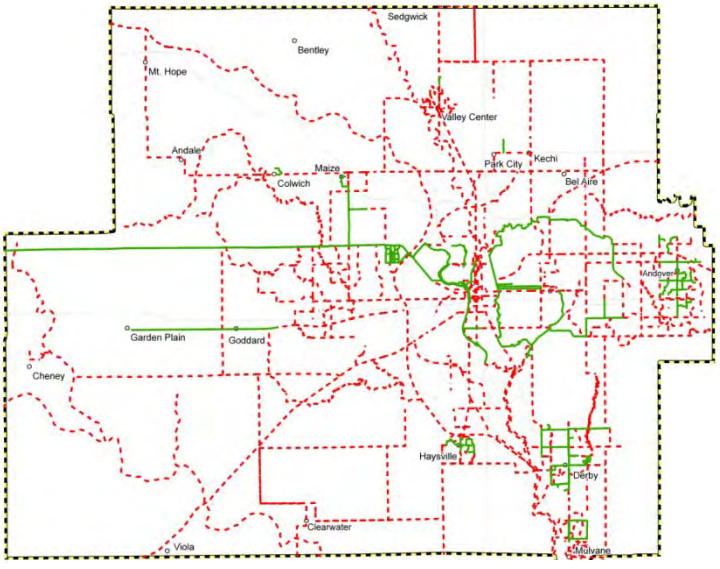
The proposed network connectivity approach yields a manageable number of pathway projects, prioritized by their ability to meet the identified transportation needs of connectivity, safety, and access to major destinations.

In the past, pathway facilities have been constructed throughout the region as opportunities arose, most often within parks and open space corridors. At 177 total miles, these existing facilities (map to the right) do not yet connect with each other, nor do they link to desired regional destinations.



Existing Facilities in the WAMPO Region

Based on the assimilation of local community pathway plans, there are 461 miles of shared-use paths proposed to be built (map below) throughout the region. However, this aggregate plan still results in a system with missing links and barriers to travel. It is also too expensive to complete based upon current levels of pathway funding.



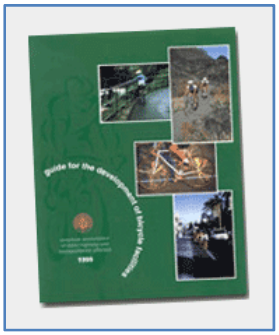
New Facilities Proposed by Local Jurisdictions throughout the WAMPO Region

At 352 miles of new facilities, the system of primary corridors proposed by this plan and shown on the map on page 3-11 is a more realistic goal for implementation as part of the WAMPO MTP 2035.

The initial spacing of the corridors is greater than optimal, given that the national average bicycle trip length is 2.5 miles; but this structure represents a realistic first step for a region that is moving beyond planning individual recreational trails to accommodating bicycling as a mode of transportation and quality of life indicator. Over time, once the primary regional system is completed, jurisdictions can continue to add to the network and increase its effectiveness.

Types of Bicycle Facilities

To appeal to a variety of Type A and Type B/C bicyclists, a variety of facility types are outlined on the following pages that can be used in the Wichita Metropolitan Planning Area to implement the intent of the WAMPO Regional Pathway System Plan. The ultimate decision on facility type for specific corridors will be made by the individual jurisdictions based upon factors such as local preference and site-specific engineering concerns.

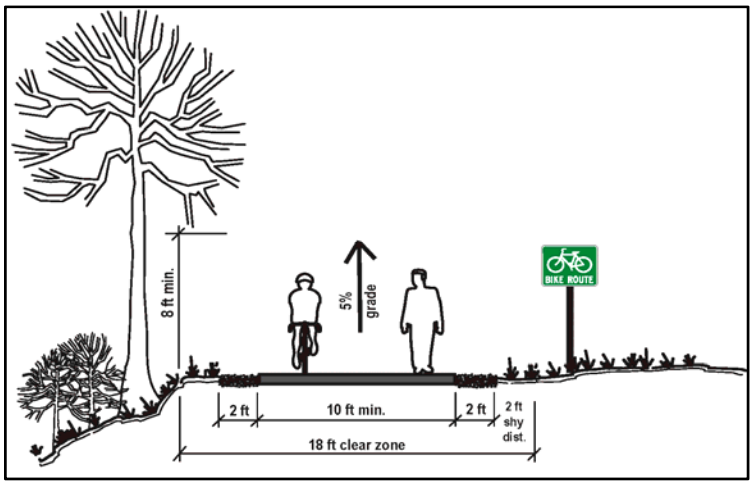


AASHTO Guide for the Development of Bicycle Facilities, 1999

All facility types must meet guidance established in the 1991 "*Guide for the Development of Bicycle Facilities*" published by the American Association of State Highway and Transportation Officials (AASHTO), which shall be used as the WAMPO Region's official bicycle facility design guidelines. This guide is currently being reviewed and updated by AASHTO. The update is anticipated to be complete in 2012. WAMPO will adopt at that time the content of the updated guide and it will supersede the guidance of the current document.

Shared Use Paths or Multi-Use Pathways

A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths are also typically used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users.



Multi-Use Pathway

Paths must meet bicycle transportation standards including a 10-foot minimum surface width, 3-foot lateral clearances, 8-foot vertical clearances, 5 percent grade, and 95-foot turning radii.

PROS:

- Often located along streams and in other open space corridors, thereby providing pleasant, shaded travel environments.
- Can provide enhanced connectivity for non-motorized travel through areas where the street system does not go.
- May provide opportunities to cross major roadways with grade-separated overpasses and underpasses.

- Often preferred by less experienced bicyclists and families with young children due to the perceived safety of bicycling away from vehicular traffic.
- May fulfill multiple community objectives including flood management, wildlife habitat protection, community greening, recreation opportunity and non-motorized transportation.
- Funding opportunities, although competitive and limited, are available for local governments to build this type of facility as independent transportation projects.

CONS:

- Pedestrians and bicyclists can have conflicts sharing facilities if pathways are poorly designed, too narrow, or lacking in enforcement or user etiquette.
- Opportunities to create complete bicycle systems comprised only of trails are typically limited and often do not connect to shopping and other major destinations within a community.
- Adjacent properties owners may feel that their privacy, personal security and/or property values are impacted by the adjacent public trail use.
- Separate rights-of-way and/or public access easements need to be purchased.
- Special design features are needed at all roadway crossings to separate users and/or alert drivers of non-motorized crossings. Bridges, underpasses and pedestrian-actuated signals are expensive project elements.
- User safety and security needs must be accommodated in the planning, design and construction of trail projects, as well as ongoing maintenance and operations.

Rail-Trails

The conversion of a former railroad corridor into a multi-use pathway. Rail-trails are most often created through the rail-banking process, which preserves abandoned rail corridors for long-term transportation use and allows trail development as an interim use.

PROS:

- Rail-trails are intact corridors if preserved through the federal rail-banking process.
- Railroad construction requirements for moderate grades and wide turning radii readily accommodate bicycle path design.
- The presence of bridges, rail ballast, and other features can lower trail construction costs.

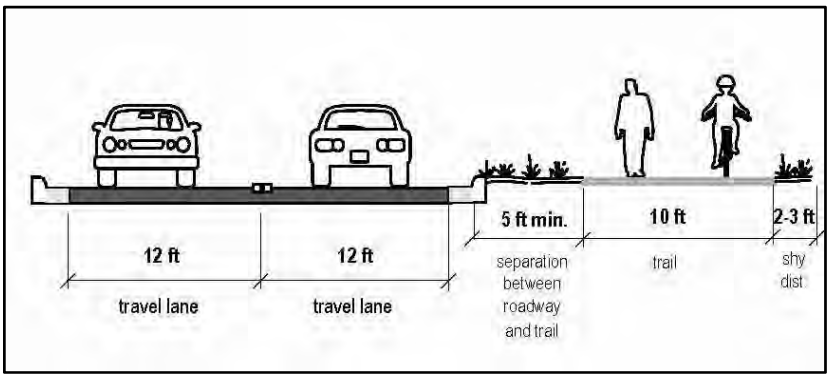
CONS:

- Rail-trail corridors are difficult to reassemble if allowed to revert to multiple adjacent property owners. Jurisdictions also often encounter resistance and takings claims from adjacent property owners if the original title to the railroad corridor is uncertain.
- The corridor may revert back to active rail use at a future point in time.

- Rail-trail corridors often intersect with roadways at mid-block locations and/or at skewed angles, which can make trail crossings challenging and expensive.

Sidepaths

A type of multi-use path running immediately parallel to a street or roadway, like an extra wide sidewalk. Sidepaths have special design challenges, as motor vehicles may not expect to encounter bikes entering an intersection from outside the travel lanes. AASHTO discourages two-way paths located immediately adjacent to roadways due to the operational and safety issues that are likely to occur.



Sidepath

Sidepaths should not be considered a substitute to street improvements even when the path is located adjacent to a highway, as many bicyclists find these paths less direct or convenient than streets, particularly for utility trips. Sidepaths must also meet AASHTO transportation standards including a 10-foot minimum path width and a 5-foot minimum separation distance from street, or a 42-inch vertical barrier from adjacent traffic.

PROS:

- Provide an alternative to roadway travel on busy streets when roadway corridors have adequate right-of-way and infrequent driveway and street intersections.
- Often preferred by less experienced bicyclists and families with young children due to the perceived safety of bicycling away from vehicular traffic.
- Accommodate both bicyclists and pedestrians, thereby eliminating the need for bike lanes plus sidewalk facilities. Sidepaths may thus offer a cost-effective alternative to roadway widening to provide bicycle lanes.

CONS:

- Places faster moving cyclists into space traditionally reserved for pedestrians.
- Unless separated, sidepaths require one direction of bicycle travel to ride against motor vehicle traffic, contrary to normal rules of the road.

- Can be less safe for cyclists than riding on the street since drivers are focused on the roadway. Cyclists are especially at risk at intersections when riding wrong-way, against traffic.
- Sidepath users must stop and yield at all intersecting streets and driveways, whereas bicyclists using roadway facilities maintain right-of-way like vehicles.
- When only provided on one side of a roadway, can cause cyclists to ride wrong-way on the road to access the path and reach destinations on the opposite side of the street.
- Many experienced cyclists and commuters often will use the roadway instead of the sidepath because they find the roadway to be more convenient, better maintained or safer. (Note: bicycles are vehicles by law and must not be precluded from roadway use when a sidepath is present.)

Bicycle Lanes

A portion of a roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use by bicyclists. Bike lanes are established with appropriate pavement markings and signing to delineate the right-of-way assigned to bicyclists and motorists, and to provide more predictable movements by each.

Bike lanes are usually paired, one-way facilities located on both sides of streets with moderate to heavy traffic volumes. They are typically not needed on local streets, but are well suited to collectors and minor arterials. The minimum width

To Ride On Streets or Off?

Many motorists seem to like sidepaths because they get bicyclists off of roadways. Pedestrians don't because they place faster moving bicycle traffic into space traditionally reserved for walking. Many bicyclists who are uncomfortable operating in traffic think that sidepaths are a good idea because of the perceived safety of being removed from the traffic stream. Safety professionals and experienced bicyclists tend to disagree because crash statistics indicate that sidewalk riders are more frequently involved in bicycle/motor vehicle crashes at intersections.

A 1994 study by the Institute of Traffic Engineers (ITE) reported that bicyclists who ride on sidewalks or sidepaths incur a 1.8 times greater risk of being involved in a collision with a motor vehicle than those who ride on the roadway. Intersections are especially hazardous for wrong-way sidewalk riders, who have been found to be 4.5 times at risk as right-way sidewalk travelers.

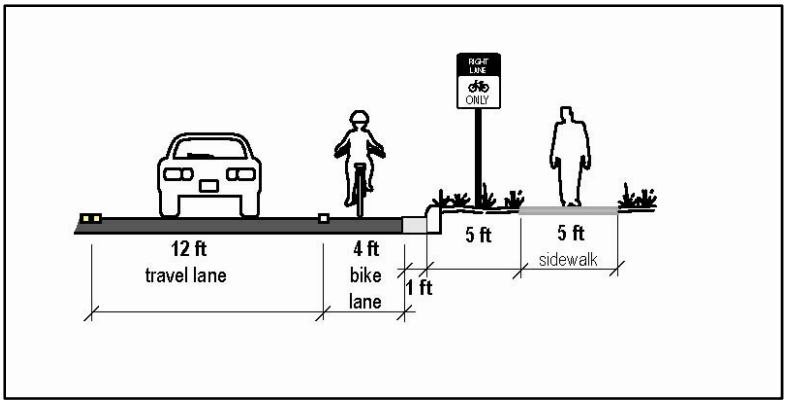
In 1996, the Federal Highway Administration (FHWA) conducted a detailed research study of bicycle-motor vehicle crashes from six states to refine and update crash type distributions. Three of the identified 38 crash types occurred with most bicyclists in the "off road" position; these resulted in 12.1% of all crashes. Another five types showed 60 percent or more of cyclists were wrong-way riders facing traffic; these types of crashes resulted in 17.6% of all collisions.

Crash type details can be found at http://safety.fhwa.dot.gov/PED_BIKE/docs/ctanbike.pdf.

of a bike lane is 4 feet, or 5 feet if adjacent to on-street parking or if measured from the curb face. Bicycle lane design at intersections must be treated carefully, following AASHTO and MUTCD guidance to minimize conflicts between bicycle and auto movements.

PROS:

- Delineate roadway space for bicyclists and motorists, encouraging more predictable movements by each.
- Are one-way facilities located on either side of a street with arrows and pavement markings indicating direction of travel. This discourages wrong-way riding, a major cause of bicycle-motor vehicle crashes.



On-Street Bicycle Lanes

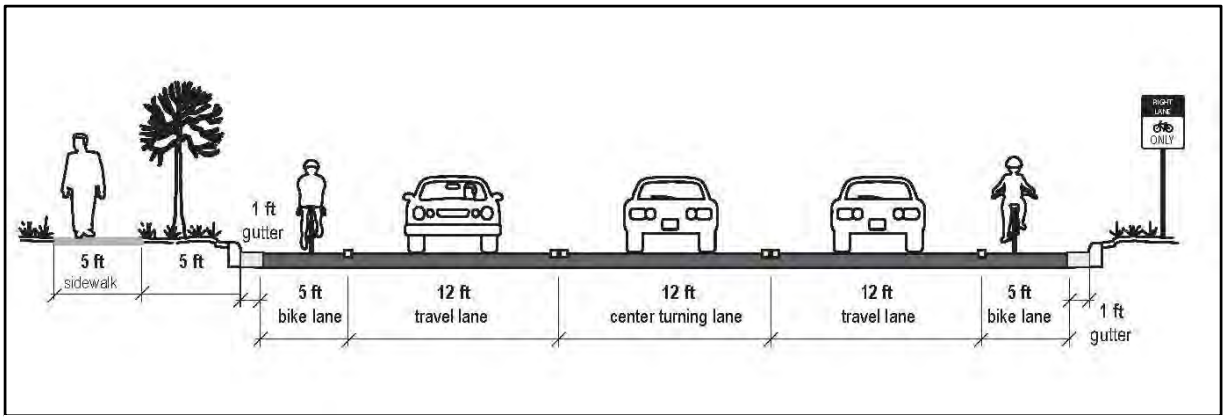
- Offer a designated and visible space for bicyclists and can be a significant factor in route choice, especially for Group B/C riders.
- Restriping wide roadways with on-street bike lanes and narrower travel lanes offers traffic calming benefits.

CONS:

- Can complicate turning movements at intersections if improperly designed.
- Require extra width when on-street parking is present, and must always be located to the left of the parking lane.
- Are not advisable where angled parking is present, unless back-in parking is used.
- Require an additional commitment to maintenance and attention to roadway edge conditions.
- Concern by some jurisdictions that bike lanes attract less experienced riders to environments that exceed their skill level. Other jurisdictions routinely provide this facility type on all arterial and collector streets specifically to better accommodate the Group B/C bicyclists.

Road Diets

Roadway retrofit projects where existing roadway space is reallocated through lane re-striping. "Road Diets" are often conversions of four-lane undivided roads into three lanes (two through lanes and a center two-way left turn lane or on-street parking). The right-of-way of the fourth lane is used to stripe two 5- to 6-foot wide bicycle lanes.



Road Diet with Bicycle Lanes

Application is most appropriate on streets with moderate traffic volumes, such as minor arterials and collectors that have been designed to the same roadway standards as the region's principal arterials. (See the Appendix for details.)

PROS:

- Benefits both vehicles and pedestrians when moderately traveled four-lane roadways are restriped. Often adds value to adjacent properties. Space for bicycle lanes is an added benefit.
- Reduces vehicle speeds and vehicle interactions during lane changes, which may reduce the number and severity of vehicle-vehicle crashes.
- Does not affect a roadway's vehicular capacity, but creates a more desirable corridor for use by other modes.

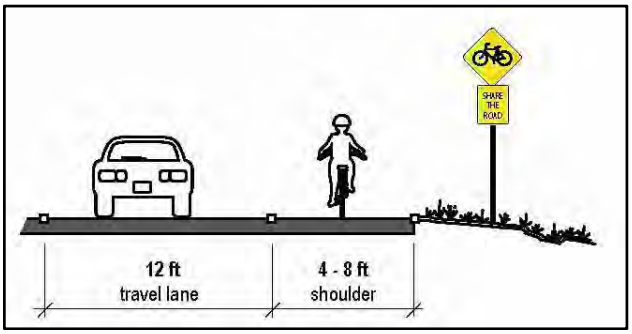
CONS:

- Initial perception is that restriping takes away two of four travel lanes, thus reducing roadway capacity. However, if intersections are properly designed, capacity is more or less unaffected.
- Is typically applied to roadways with 15,000-18,000 ADT or less. Around 23,000 ADT is the maximum traffic volume that a three-lane design can support.

Paved Shoulders

The portion of a roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of sub-base, base and surface courses.

Paved shoulders should be free of rumble strips and be at least 4 feet wide to accommodate bicycle travel; additional width is desired if motor vehicle speeds exceed 50 mph.



Paved Shoulders for Bicycling

PROS:

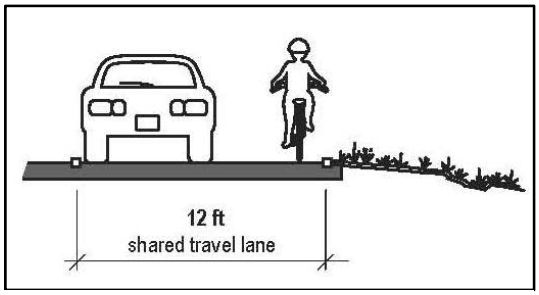
- Best solution in rural areas to provide additional operating width.
- Paving shoulders offers overall benefits including extending the service life of the road surface, providing a break-down area for motor vehicles, and providing added roadway space for slower moving bicyclists.

CONS:

- Should not be designated as Bike Routes where speeds exceed 40 mph or truck volumes are high. Share-the-Road warning signs are a preferred MUTCD treatment. However, the corridor should not be signed for bicyclists if the roadway fails to meet AASHTO guidelines for shoulder bicycle facilities.
- Must be paved and maintained to the same surface standard of regular travel lanes.
- Rumble strips and raised lane markers should not be used on routes intended for bicycle travel.

Shared Roadway

A roadway which is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders. Shared roadways typically have no bikeway designation, but should be designed and constructed under the assumption that they will be used by bicyclists and be without hazards to bicycle travel. Shared lanes are typically 12 feet wide or less, allowing cars to safely pass bicyclists only by crossing the center line or moving into another traffic lane.



Shared Roadway

PROS:

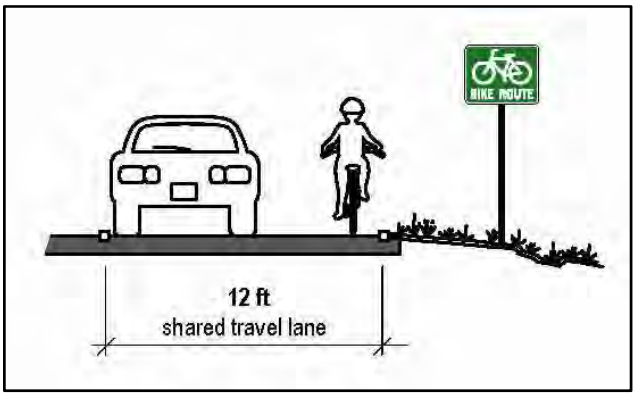
- To varying extents, bicycles will be used on all streets and highways where they are permitted.
- Some experienced cyclists dislike special bicycle accommodation on roadways and prefer instead to use their bicycle as a vehicle in shared lanes by following the principles of "Effective Cycling."
- Shared roadways are a prudent solution for local streets where bike lanes and sidepaths are not needed due to low traffic volumes and speeds.

CONS:

- Width is the most critical variable affecting the ability of a roadway to accommodate bicycle traffic. Heavily traveled shared roadways are encouraged to provide outside lanes that are 14 feet wide to allow bikes and motor vehicles to better share the road.
- Lack of designated bicycle accommodation will not encourage people to ride within a given corridor, particularly when traffic speeds and volumes are moderate to high.

Signed Shared Roadway or Bicycle Route

A shared roadway which has been designated with signing as a preferred route for bicycle use to provide continuity to other bicycle facilities, or to designate preferred routes through high-demand corridors.



Shared Roadway Signed as Bicycle Route

Applications for this treatment are limited within the WAMPO Region, as qualifying low-volume streets typically provide no connectivity. On through streets, other roadway improvements such as on-street bike lanes will likely be required before a corridor should be designated as a bicycle facility.

A shared lane pavement marking or "sharrow" treatment can also be used to indicate that bicyclists and motorists are expected to share the travel lane. With effective placement, sharrows can increase motorist awareness and help legitimize bicyclist use of the travel lane.

PROS:

- Indicates to cyclists that there are particular advantages to using these routes compared to alternative routes.
- Provides way finding for routes that provide continuity to other facilities such as bike lanes and shared use paths.
- Identifies local streets that provide connectivity and lead to an internal destination such as a school, park or commercial district.

CONS:

- Erecting Bike Route signs does not improve overall travel conditions within a corridor. Hazard removal and maintenance needs must also be addressed.
- Traffic control devices may need to be adjusted to give greater priority to cyclists on the route. Local streets that have un-signalized intersections with major arterials are not good candidates for Bike Route signing due to the hazards associated with un-signalized at-grade crossings.
- Offers a low-cost solution for streets with acceptable volumes, speeds and connectivity.

2011 Update to the Regional Pathway System Plan (RPSP)

The Regional Pathway System Plan (RPSP) was originally adopted in 2007. Several things have happened since it was adopted; WAMPO updated the region's long-range transportation plan (Metropolitan Transportation Plan (MTP) 2035), several segments of the pathways system have been completed, and more emphasis has been placed on system performance and monitoring. The RPSP must be consistent with goals, objectives, and strategies of the MTP 2035 and should reflect the pathways system as it currently exists. To that end, the RPSP Project Advisory Group (PAG) was reconvened to offer guidance in the review and update of the Plan.

This update to the RPSP is intended to be limited in scope. The purpose of the update is to:

- Provide a link between the RPSP and the MTP 2035;
- Identify performance measures;
- Highlight progress since the RPSP was adopted in 2007; and
- Identify emerging issues or opportunities to address in the next major update to the RPSP.

A more comprehensive update to the Plan is scheduled in 2013 as part of the next update to the MTP and will reflect the goals, objectives, and strategies of that planning effort.

Link to the Metropolitan Transportation Plan (MTP) 2035

While autos are the main type of transportation in the region, improving conditions for bicyclists and pedestrians is important in order to achieve the long-range vision of the regional transportation system. The vision established by the MTP 2035 is for a **safe**, **efficient**, **accessible**, and **affordable** multimodal transportation system.

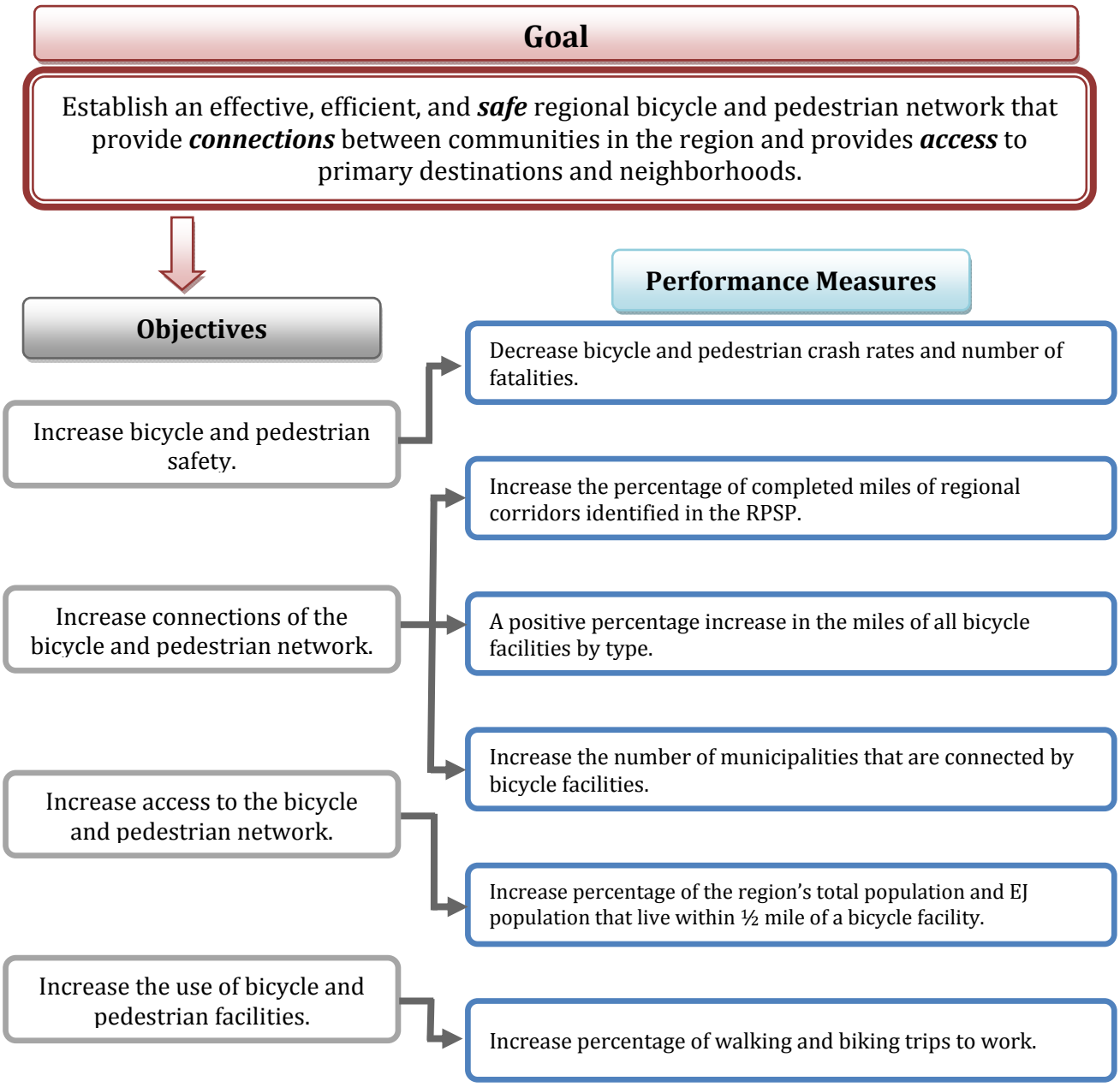
There are a number of benefits that can be gained by both the community and individuals by improving the conditions for biking and walking. These benefits overlap the vision and the goals identified in the MTP.

- **Safety:** Studies have shown that improved walking and biking facilities decrease pedestrian and bicyclist crash rates. Walking and biking for transportation can also improve individual health by increasing physical activity.
- **Efficiency:** Walking and biking are resource efficient travel modes that consume minimal road and parking space and have a smaller impact on the environment. Redirecting individuals in single occupancy vehicles onto their bikes or feet for shorter trips can help decrease congestion and improve air quality.
- **Accessibility:** Improving the quality and connectivity of the walking and biking system increases travel options and improves the overall accessibility of the regional transportation network. Investments in the bicycle system can increase the equity of the transportation system by improving access to jobs and services for people of all income levels.

- **Affordability:** Biking and walking are relatively affordable modes of transportation. A well planned network can help decrease the overall transportation costs for users and for the region.

Two main pathway issues that were identified by stakeholders and the public during the development of the MTP 2035, as well as the 2007 RPSP, were **connectivity** and **safety**. These two issues were listed as the primary reasons people do not walk or bike. Building off of these two main issues and the MTP 2035 vision, a goal statement for the Regional Pathway System Plan (RPSP) was developed for this update.

Regional Pathway System Plan (RPSP) Goal & Objectives



The goal statement helps identify the overall objectives for the RPSP plan. The performance measures were developed to gage progress in achieving the objectives.

Performance Measures

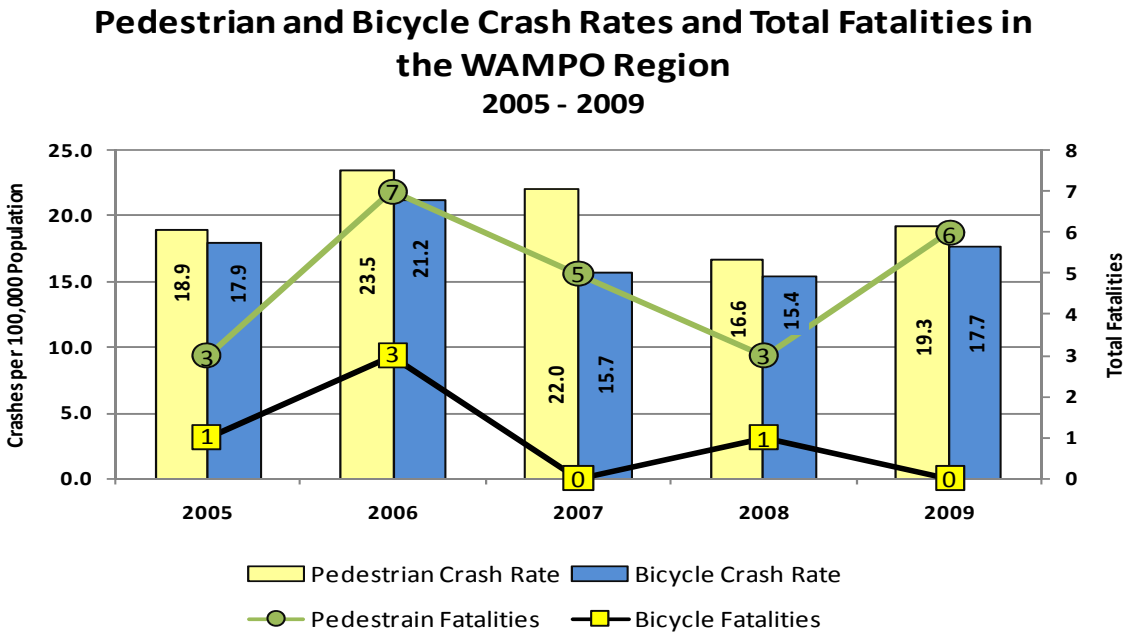
A total of six performance measures were identified to measure progress on safety, connections, access, and use. This plan identifies the benchmark numbers for each of the six identified performance measures. The performance measures identified will be recorded to identify those metrics that are important to the region and can be used to measure the effectiveness of achieving the goals of the MTP 2035.

The data used to create the benchmark numbers for each performance measure will be recalculated when the needs assessment is conducted for future updates to the Metropolitan Transportation Plan (MTP), which takes place every five years (or four if the region becomes classified as nonattainment for air quality). The comparison will help the region measure progress over time. The six performance measures and the benchmark calculations for ***safety***, ***connections***, ***access***, and ***use*** are listed below.

Safety Performance Measures:

1. **Decrease bicycle and pedestrian crash rates and number of fatalities.**

The pedestrian and bicycle crash rates illustrated below show the number of crashes that occur for every 100,000 persons in the region. For example, in 2009 there were 19.3 pedestrian crashes and 17.7 bicycle crashes for every 100,000 persons. Fatalities in 2009 for pedestrian and bicycle crashes (identified by the number in the data point) were one and three, respectively.



Source: Kansas Department of Transportation (DOT) KARS database 2005-2009.

The crash rates for both pedestrians and cyclists are variable over the five years from 2005-2009. The most consistent trend is that pedestrian crash rates and the number of fatalities are constantly higher than bicycle crash rates and number of fatalities. There is a spike in crash rates and number of fatalities for both pedestrians and bicycles in 2006.

WAMPO will use an average of the crash rates and fatalities as a performance measure benchmark in which to compare future crash rates and fatalities.

Connections Performance Measures:

2. **Increase in the total miles of regional corridors completed annually.**

Since 2007, nine miles of designated bicycle facilities have been added to the regional corridors. To date, 109 miles (24%) of a proposed 461 miles of designated bicycle facilities have been completed. The nine miles is a combination of completed or partially completed missing links, as well as the addition of bicycle facilities on both ends of a corridor.

Miles of Designated Bicycle Facilities	2007	2011
Regional Corridors		
Existing	100	109
Percentage Change		**9%**

The types of facilities that have been added are primarily bicycle and pedestrian in the form of sidepaths and shared-use paths. Approximately one mile of on-street bike facilities was added on Mount Vernon between Broadway and Greenway.

WAMPO will use the total miles completed annually as a performance measure benchmark. Any increase to the total miles of pathway facilities from year to year will show improvement. No increase in total miles from the previous year will reflect that no progress was made.

3. **Increase in total miles of all bicycle facilities by type; including designated bicycle facilities along regional corridors and designated local bicycle facilities.**

Between 2007 and 2011 there was an increase in the miles of all types of bicycle facilities, except for wide shoulders.

As identified in the table on the following page, the total percentage of miles of bicycle facilities in the region has increased 31% between 2007 and 2011. The region now has a total of 177 miles of bicycle facilities. This figure, 177 miles, will function as the performance measure benchmark. Progress in developing facility miles will be gauged against this total.

Miles of all Bicycle Facilities in the Region			Increase
Total by Facility Type			
Shared-use Paths	98	133	38%
On-Street Bicycle Lanes	2	9	350%
Wide Shoulders	35	35	0%
TOTAL	**135**	**177**	**31%**

4. Increase the number of municipalities that are connected by designated bicycle facilities.

Of the 21 cities in the WAMPO region, only four are connected by a bicycle facility. The cities of Maize and Wichita are connected, as are the cities of Garden Plain and Goddard. WAMPO will use four connections as the benchmark for this performance measure.

The table below represents the current community connections as they existed in 2007, the year in which the RPSP was approved, and as of 2011, the year in which the RPSP will be updated.

Community Connections	2007	2011
Number of municipalities connected by bicycle facilities	**4** o Maize & Wichita o Garden Plain & Goddard	**4** o Maize & Wichita o Garden Plain & Goddard

This total, 4, will function as the performance measure benchmark. Progress will be tracked based on new city-to-city connections.

Access Performance Measure:

5. **Increase percentage of the region's total population and EJ population that live within ½ mile of a bicycle facility.**

The following table identifies the percentage of the total population (42%) and the EJ population (84%) that live within one-half mile of a bicycle facility.

	2008
Percentage of the Region's Population that live within ½ Mile of a Bicycle Facility	42%
Percentage of EJ Population* that live within ½ Mile of a Bicycle Facility	84%

*EJ Population = Environmental Justice Populations, identified as minority and low-income in the WAMPO Title VI & Environmental Justice Policy.

Many studies have shown that the closer people live to bicycle facilities, especially on-street bike lanes, the more likely a person is to use that facility. In 2008, 42% of the region's population lived within ½ a mile of a bicycle facility. Based on the MTP 2035 population projections, if no further facilities are added by 2035, the percentage of people living within ½ mile of a bicycle facility will decrease to 39%.

The Household Travel Survey shows that people who do not own a car are more likely to walk or bike for transportation than those that own vehicles. A significant portion of households that make up the Environmental Justice (EJ) population do not own a vehicle; thus it is important that there are safe and convenient walking and biking network that connects to destinations. As shown above, 84% of the EJ population currently lives within ½ mile of a bicycle facility.

As a performance measure benchmark, WAMPO will use the percentage of people living within one-half mile of a bicycle facility. An increase in this percentage will show positive growth. A decrease, as projected if no facilities are added, will indicate negative growth.

Use Performance Measure:

6. **Increase percentage of walking and biking trips to work.**

Walking and biking are a personal choice and are in direct completion with the private automobile and transit. As identified below, walking accounts for only 2.9% of all trips in the region and only 1.4% of work

trips. Bicycle use, as identified in the table below, is even less, 0.4% for all trips and 0.2% for work trips.

Percentage of Trips Taken on Bike or on Foot		
	To Work*	All Trips**
Walk	1.4%	2.9%
Bike	0.2%	0.4%

*Source: U.S. Census Bureau, Census 2000 Summary File 3. QT-P23 Journey to Work

**Source: WAMPO Region Household Travel Survey 2011.

Changes in the percentages of those who walk or bike would signal a change in travel behavior. WAMPO will use the figures identified in the table above as a performance measure benchmark to compare future travel behavior.

Progress Since 2007

Approximately 4.5 miles of missing links were completed from 2007 to 2011, with an additional 2.5 miles under construction. The completed and under construction links represent <1% of the 98 miles of missing links. At that rate, it will take an additional 65 years to complete all of the identified missing links. While completion of all 98 miles of missing links by 2015 is probably not tenable, there has been significant, tenable progress at the local level with new pathways and bike lanes in general.

Completed Missing Links

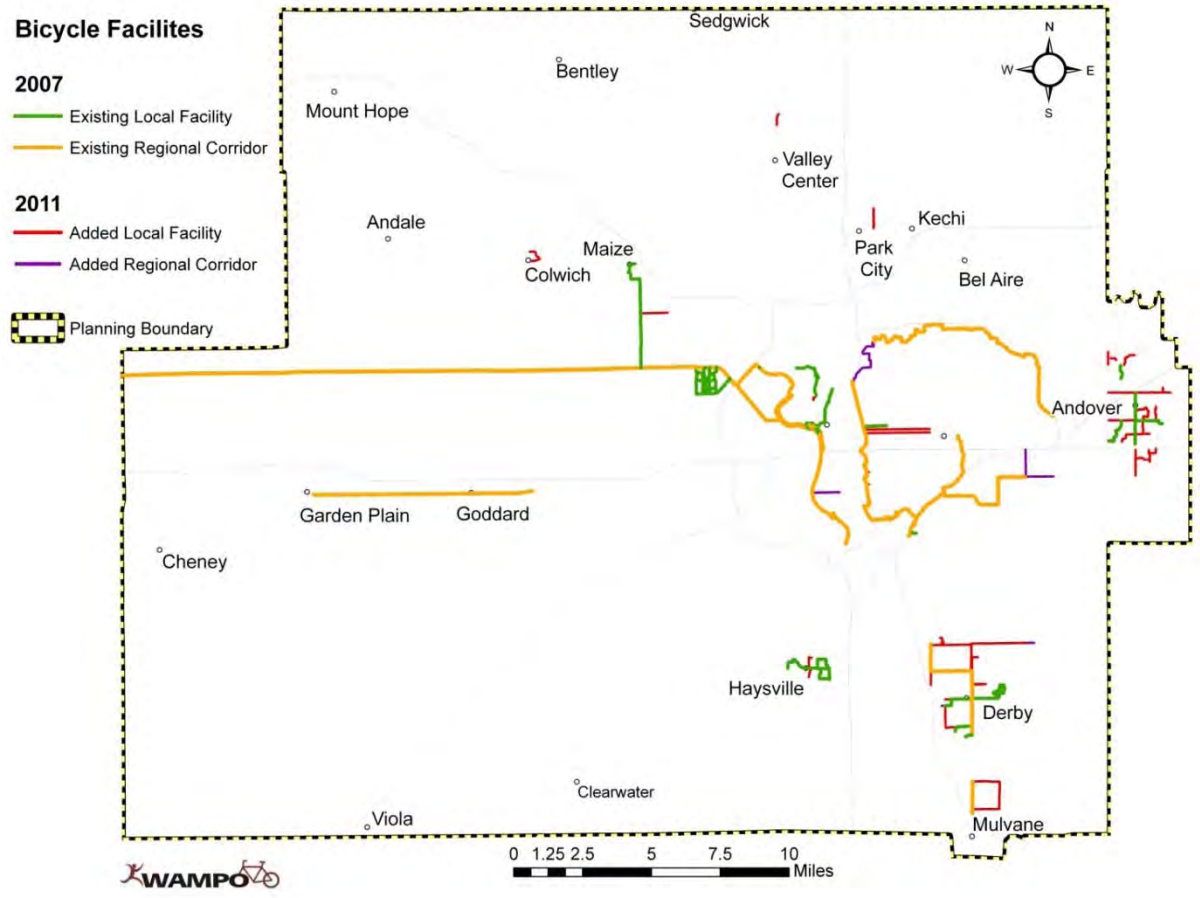
Link & Corridor	Description	Miles
#1 – L Complete	McAdams Pathway Links the Canal Trail to K-96 Trail	1.5
#2 - M *Partial Completion*	Extension of Harry St. path between Greenwich & 127th	1
#9 - D *Under Construction*	Redbud Trail Rail-banked corridor that connects the Canal path to 17th & Oliver	2.5
#13 - F *Partial Completion*	Mount Vernon on-street bike lanes From Broadway to Greenway Blvd	1
#18 -K *Partial Completion*	N. Main Haysville Connection East side of Main St. from Grand Ave to Karla	<1

Over thirty miles of shared-use paths and approximately six miles of on-street bike lanes were added by jurisdictions throughout the region. These facilities were funded with a mixture of local funds, federal Transportation Enhancement (TE) funds, and federal Surface Transportation Program (STP) funds. Multimodal access was also improved through the installation of bike racks on all Wichita Transit buses and installation of bike racks at 126 locations along transit routes.

Funding remains a challenge in the region. Transportation Enhancements (TE) continue to be the funding mechanism for which many jurisdictions compete. While this is a good source of funding, TE funds are not guaranteed because of the statewide competitive process and the uncertainty of future federal transportation legislation. A mix of additional funding mechanisms and prioritization is needed to meet the future identified transportation needs and bring the region closer to the long range vision.

The map below identifies the pathways as they exist today. The pathways system in place in 2007 has been updated to reflect the addition of new pathways and completed missing links, as of 2011.

2007 — 2011 Existing Bicycle Facilities



Bicycle Planning Principles

This Regional Plan is not about selecting one facility type that should next move forward and be constructed. Rather, it is a comprehensive approach for how bicycling can be accommodated across a 1,050 square mile region. It is not a single Regional Plan, but an aggregate of many planning efforts, past and present, that have been developed for various parts of the region.

The underlying principles for overall plan development include the following:

- Recognize that there are various types of pathway users and provide a variety of facility types to meet the needs of all.
- Examine opportunities for providing additional miles of off-road trails within linear open space corridors.
- Incorporate local pathway plans and identify missing connections between community plans.
- Determine meaningful transportation linkages that connect destinations such as employers, schools, medical services, residential neighborhoods, and retail centers.

It is important to recognize that WAMPO does not have the intent to mandate Regional Pathways System Plan specifics to jurisdictions. Instead, the Plan uses the aforementioned principles to identify reasonable corridors that make good sense from a transportation perspective. Ultimately, corridor location could vary by half a mile or more dependent upon local preference and engineering concerns. Furthermore, facility type could depend upon local funding availability and other situational factors. In the end, implementation will be wholly dependent upon the decision-making processes of each jurisdiction.

Map Details

The map on the page 3-11, and the associated Geographical Information Systems (GIS) database maintained by WAMPO, includes all pathway projects existing, funded, and proposed by one or more governmental jurisdictions. These facilities are depicted on the map as solid and dashed lines.

Overlaid onto this base is an analysis that combines desired bicyclist travel patterns to connect existing facilities, with realistic opportunities for future pathway development. This analysis resulted in 24 primary corridors that comprise the recommended regional network. The missing portions of these corridors are represented graphically by dashed lines.

- Red dashed lines indicate travel corridors to be improved for bicycle travel.
- Green dashed lines indicate proposed multi-use pathways that follow waterways and linear open spaces.

- Blue dashed lines represent a rural corridor recommended for bicyclist/motorist warning signing.

This Plan, as updated, identifies 24 corridors/sub-corridors as potential regional pathways. Each corridor is keyed with a letter that corresponds to text on pages 3-11 through 3-37 detailing the existing conditions, recommended bicycle treatments, and connections to be made by implementing designated bicycle facilities within each segment.

The process to update this Plan included limited public input and PAG review. New and emerging opportunities were identified. Revisions to existing corridors, as well as new corridors identified through the public and PAG review are included as a new chapter in this Plan, Chapter 7: Emerging Opportunities and Issues.

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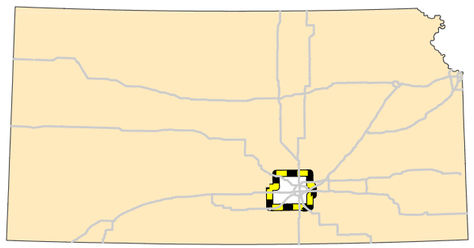


Legend

Existing

Regional Corridors

- Multi-use Trail or Sidepath
- Wide Shoulder
- On-street bike-lane
- Rural Loop
- Funded

Other Local Facilities

- Multi-use Trail or Sidepath
- On-street bike-lane
- Funded

Future Corridors

Missing Links

- Missing

Greenways

- Missing
- Other Planned Facilities

- Wichita Mid-Continent Airport
- School
- Major Employer
- Minor Employer
- City
- Highway or Interstate
- Arterial Street
- River or Stream
- Park
- WAMPO Planning Boundary

WAMPO

N W E S

Harvey County
Reno County
Kingman County
Sumner County
Butler County

Sedgwick
Bentley
Mount Hope
Andale
Maize
Colwich
Valley Center
Park City
Kechi
Bel Aire
Andover
Garden Plain
Goddard
Cheney
Haysville
Derby
Clearwater
Viola
Mulvane

0 1 2 4 6 8 Miles

Wichita Area Metropolitan Planning Organization
271 W 3rd St., Ste. 208,
Wichita, KS 67202
316 779 1321

REGIONAL PATHWAY CORRIDORS

CORRIDOR A: OZ RURAL LOOP *91 MILES*

History	▶ In April 2006, the Oz Bicycle Club identified and mapped a 100 mile loop around the City of Wichita that recreational cyclists use for riding opportunities off of heavily traveled urban arterials. ▶ In 2008, the club requested a local match from the Board of Sedgwick County Commissioners in order to apply for a grant from Bikes Belong to install share the road signs along the identified route. The Board of Sedgwick County Commissioners approved the match; however the grant from Bikes Belong was not awarded.
Existing/Planned Facilities	▶ **Future paved roadway shoulders**, or on-street bicycle lanes developed to urban street standards, will be provided along this identified loop as roadway segments are improved as part of Sedgwick County's Capital Improvements Program. As suburban parts of the WAMPO region continue to grow and these roadways become widened to accommodate additional lanes and vehicular traffic flows, they need to accommodate bicycle travel. ▶ **Share-the-Road Signing** is an option found in the 2009 Manual of Uniform Traffic Control Devises (MUTCD) published by the USDOT. Diamond shaped and yellow warning signs caution drivers that there may be bicyclists on the roadway. Such signs do not designate a corridor as a bicycle facility, but alert drivers to existing or potentially hazardous road conditions like sharp curves, slow moving vehicles, and potential cyclists. Share-the-road signs are appropriate for use on higher speed suburban and rural roadways and will be implemented in conjunction with shoulder improvements. 
System Connectivity	▶ The identified Oz route intersects with several proposed regional projects. These connecting corridor will become key "escape routes" for recreational bicyclist desiring access from the urbanized area to the county's scenic roadways.

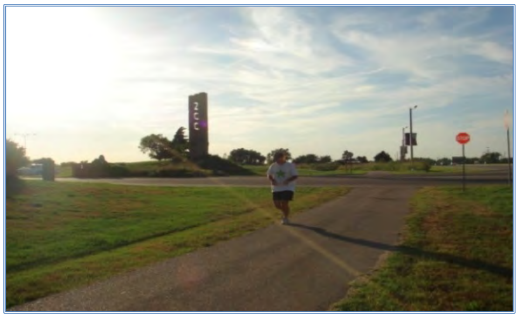
In situations where there is a need to warn motorists to watch for bicyclists traveling along the highway, the SHARE THE ROAD (W16-1P) plaque may be used in conjunction with the W11-1 sign.
--2009 MUTCD, Section 9B.19

CORRIDOR B: 53RD STREET NORTH — 23 MILES

Future Need	▶ As the Wichita region continues to grow and develop to the north, 53rd Street should be preserved and enhanced as a regional east/west bicycling corridor to connect the communities of Andale, Colwich, Maize, Wichita, Park City, and Bel Aire.
Roadway Classification	▶ **Collector Roadway –** two lane rural road from 247th to Meridian. ▶ **Minor Arterial –** from Meridian to I-135, built to a four lane cross section. ▶ **Minor Arterial –** from I135 to 127th, built to a two lane cross section.
Traffic Volumes	▶ **2,000 – 5,000 ADT**, with volumes >5,000 at the intersection with I-135.
Future Planned	▶ The affected local jurisdictions shall determine appropriate facility recommendations to implement the intent of this primary bicycle corridor.
System Connectivity	The major east/west corridor will intersect with the following corridors: ▶ planned Andale bike path along 247th ▶ potential future greenway projects along tributaries of the Cowskin Creek ▶ future extension of the multiuse trail along Maize Road ▶ future extension of the Big Arkansas River Trail north ▶ future trail along the Little Arkansas River ▶ proposed rail-banking of the BNSF rail line to Valley Center - Corridor K (3) ▶ proposed Park City bike path along Hydraulic ▶ proposed on-street route on Oliver/47th – Corridor N ▶ proposed bike facility along Webb Road/95th ▶ intersects with the Oz recreational loop ▶ direct connection to the Wal-Mart Supercenter at 53rd St. N. & Meridian

CORRIDOR C: 21ST STREET NORTH / ZOO BOULEVARD 25 MILES

Status	▶ **Existing**
Roadway Classification	▶ **Collector Roadway** – two lane rural road with paved shoulders from 407th west to 119th (18 Miles) ▶ **Principal Arterial** – 21st stays a two lane rural road with paved shoulders from 167th to 119th and becomes a multi-lane roadway from 119th to Hoover/55th (4 Miles) ▶ **Principal Arterial** – Zoo Blvd from 21st to Central (3 Miles)
Traffic Volumes	▶ **500 – 6,000 ADT** in rural parts of the county ▶ **11,000 – 31,000 ADT** between 119th and Zoo Blvd ▶ **11,000 – 30,000 ADT** on Zoo Blvd, with 37,000 ADT at the I-235 interchange
Existing Facilities	▶ **Paved Shoulders** – Sedgwick County Public Works has provided wide paved shoulders from the County line to 119th Street that make 21st an excellent bicycling corridor across the western part of the county. ▶ **Sidepath** – A 10-foot shared-use path starting at 119th street, first on the north side of 21st, then switching to the south side to connect with Sedgwick County Park, Zoo and Botanical Gardens. The shared-use path continues to Central Avenue. ▶ **Bike-lane** – Directly east of I-235, a bike-lane exists on Windmill Road, connecting Zoo Blvd to the northern portion of the Arkansas River Trail network.
System Connectivity	▶ This major east/west corridor connects the City of Wichita and Sedgwick County to the Cheney Reservoir on the Reno/Kingman County line. ▶ Connects to the existing shared-use path going north on Maize Road. ▶ The Oz Rural Loop uses a portion of this Corridor from 215th Street to 119th Street.



CORRIDOR D: REDBUD TRAIL OR BNSF / 17TH STREETCORRIDOR

11 MILES

Status	▶ The City of Wichita received a Transportation Enhancement grant to construct a portion of this corridor from the Canal Route to Oliver Avenue. Parts of the shared-use path are complete and the remaining portions are in the design phase and are scheduled for completion by early 2013.
Corridor History	▶ This corridor was identified as a future bike path in the 1989 Comprehensive Bicycle Plan for the Wichita Metropolitan Area, 1996 Wichita Parks and Pathways Plan, and 2008 Wichita PROS Plan. ▶ In the late 1990s, BNSF identified 11 miles of rail corridor for abandonment from 13th and Washington to the Sedgwick/Butler County Line (159th Street). ▶ The City of Wichita completed a feasibility study in January 2002 to examine options for the use of the corridor upon the ceasing of BNSF rail operations. Based on information in the study, City Council authorized staff in May 2002 to negotiate with the BNSF Railroad to rail-bank 9.83 miles of the corridor from Hydraulic Street to 159th Street. ▶ The City of Wichita and BNSF agreed to a Rail-banking and Donation Contract on April 18, 2005. ▶ The City of Wichita has rail-banked approximately 10 miles of the corridor from Hydraulic Street to 159th Street. ▶ Butler County Economic Development (BCED) rail-banked the 10.6 mile portion between Augusta and Andover. In April 2010, the Surface Transportation Board authorized the City of Andover as the interim trail manager for the portion through Augusta.
Major Issues	▶ Unclear land title issues in certain segments of the corridor in Butler County. ▶ Pending Opt-In Class Action lawsuit for just monetary compensation from the federal government. ▶ Mid-block crossings of major arterial streets. ▶ Concerns with perceived safety and security by some property owners living along suburban sections. ▶ Full support for trail development within the adjacent neighborhoods (including the Ken-Mar neighborhood) for community development and to increase safety.

Existing / Planned Facilities	▶ Rail-banking ensures long-term corridor preservation and allows accommodation of municipal infrastructure, including several water and sewer lines. Adjacent property owners concerns with title ownership, public access and potential crime will need to be addressed before this corridor can develop as a shared-use path for the full length. However, the corridor's long-term transportation potential should be preserved in all sections.
Candidate Sections for Initial Phasing	▶ Regional connections from the City of Andover pathway system to the existing K-96 Bicycle Path. ▶ Trail development as a positive amenity in the Ken-Mar Neighborhood that assists with local revitalization efforts in the Central-Northeast Area Plan

Sharrow Lane Marking

A **shared-lane marking** or **sharrow** is a street marking placed in the center of a travel lane to indicate that a bicyclist may use the full lane.

CORRIDOR E (1): PRAIRIE SUNSET TRAIL 13 MILES

Corridor History	▶ This rail line was abandoned by the Central Kansas Railway, L.L.C. (CKR) on the west side of Wichita, from McCormick Avenue, south of Kellogg, westward to the eastern city limits of Garden Plain, Kansas. ▶ The City of Wichita rail-banked the section from Hoover Rd. to 119th Street West. ▶ Sedgwick County rail-banked the mile section between 119th and 135th Streets. The City of Wichita has rail-banked the section from 135th Street to 167th Street. ▶ The Prairie Travelers 501(c)(3) organization holds the access rights to the eight miles of rail-banked corridor extending from 167th Street west to 295th Street at Garden Plain.
Existing/Planned Facilities	▶ Shared-Use Path Development is underway from 167th West to 295th West by the Prairie Travelers, including bridge retrofits along the corridor and development of a park in downtown Goddard. ▶ A trail open for public use should continue east to at least the Cowskin Creek, and ideally to link to major employers and a potential pathway along The Big Ditch, if a shared-use path can be routed through the Bombardier Learjet site. ▶ A soft-surface, crusher fines trail tread over the railroad ballast may be acceptable initially due to the rural location. Paving the facility may be desired as a long-term option. ▶ A high priority one mile connecting trail link shall be provided to the north along the Cowskin Creek, grade-separated from Kellogg Drive, to link with proposed bicycle facilities on Maple. This will create a continuous regional east/west route.

CORRIDOR E (2): MAPLE STREET — 6.5 MILES

Roadway Classification	▶ **Minor Arterial** – from the western Urbanized Area Boundary to the Arkansas River.
Traffic Volumes	▶ West of 119th: **<10, 000 ADT.** ▶ Between 119th and West Street: **15,000 – 20,000 ADT** with > 20,000 at the intersections with Julia, Ridge, and Tyler. ▶ Between West and Broadway: **3,000-11,000 ADT.**
Future Planned	▶ The affected local jurisdictions shall determine appropriate facility recommendation to implement the intent of this primary bicycle corridor.
System Connectivity	Developing Maple Street with a continuous on-street bicycle facility will provide links to: ▶ trail along Cowskin Creek to connect to Prairie Sunset Trail ▶ developing western subdivisions ▶ potential future greenway projects along tributaries of the Cowskin Creek ▶ potential future trail along the Big Ditch ▶ plans for bicycle accommodations through the Arena Neighborhood, ideally on Waterman Street ▶ continuation east with on-street bikeways on Douglas Avenue and/or 1st and 2nd Street

Bike Box

A **Bike Box** is a non-standard treatment applied at signalized intersections in conjunction with restricted right turns for motor vehicles. The treatment basically requires motorists at a red light to stop a few feet behind the crosswalk so that bicyclists can position themselves in front of the queue.

CORRIDOR E (3): DOUGLAS STREET / WATERMAN *8 MILES*

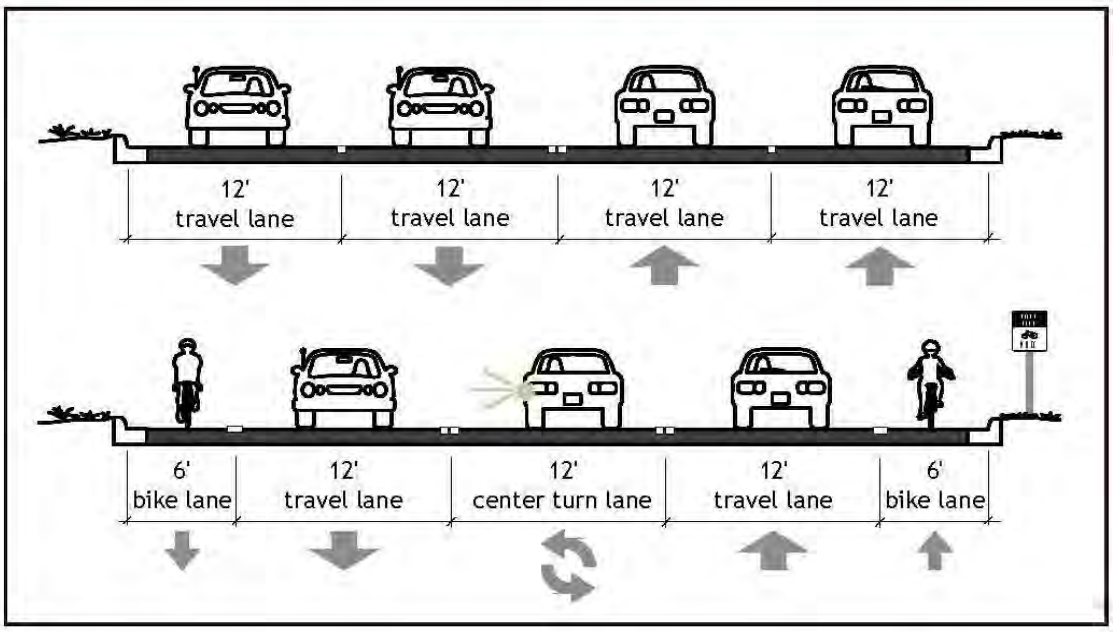
Roadway Classification	▶ **Minor Arterial** – Douglas from West/39th W to Webb Rd / 95th E. ▶ **Local Road** – Waterman.
Traffic Volumes	▶ West of Seneca: **<8,000 ADT.** ▶ Between Seneca Street and Webb Road: **10,000 – 16,000 ADT.** ▶ On Waterman through downtown: **<5,700.**
Future Planned	▶ The affected local jurisdictions shall determine appropriate facility recommendations to implement the intent of this primary bicycle corridor. Corridor currently being reviewed and will be revised to reflect the updated Wichita Bicycle Master Plan and the Douglas Avenue Transit Oriented Development (TOD) Study.
System Connectivity	Developing Douglas Street and Waterman with continuous on-street bicycle facility will provide links to the following: ▶ existing Arkansas River Trail ▶ potential north/south bike lanes through Downtown on either Topeka or Market ▶ plans for bicycle accommodation through the Arena Neighborhood, ideally on Waterman ▶ existing Canal Hike and Bike Trail ▶ proposed bike lanes on Oliver ▶ existing Gypsum Creek Bicycle Path ▶ proposed bike path along Webb Road/95th (Corridor P)

Cycle path

A **Cycle Path** is a special path on which people can travel by bicycle separately from motor vehicles.

CORRIDOR F (1): MOUNT VERNON *5 MILES*

Roadway Classification	▶ **Minor Arterial** – from Broadway to Woodlawn
Traffic Volumes	▶ **5,000 – 9,000 ADT**
Existing/Planned Facilities	▶ The City of Wichita added bike lanes on Mount Vernon from Broadway to Greenway. ▶ The proposed corridor would continue from Broadway east to Woodlawn ▶ The project is currently included in the Wichita Capital Improvement Plan with design in 2014 and construction in 2015.
System Connectivity	Developing Mount Vernon as a continuous on-street bicycle facility will provide links to the following: ▶ Arkansas River Trail ▶ north/south bicycle corridor through Downtown Wichita on Main / Broadway /Topeka - corridor K (2) ▶ existing Canal Hike and Bike Trail ▶ proposed bicycle corridor on Edgemoor - corridor N ▶ existing Gypsum Creek Bicycle Path ▶ connection to the east on bicycle facilities along Pawnee



CORRIDOR F (2): PAWNEE AVENUE/23RD S *8 MILES*

Roadway Classification	▶ **Principal Arterial** – from Woodlawn to Rock ▶ **Minor Arterial** – from Rock into Andover
Traffic Volumes	▶ West of Rock Road: **13,000 – 15,000 ADT** ▶ Between Rock Road and 111th E: **5,000 – 8,000 ADT** ▶ East of 111th E: **<3,000 ADT**
Existing/Planned Facilities	▶ The affected local jurisdictions shall determine appropriate facility recommendations to implement the intent of this primary bicycle corridor extending east of Webb Road.
System Connectivity	Developing Pawnee as a bicycle corridor will link to the following: ▶ continuation of the east/west bicycle corridor on Mount Vernon ▶ existing Gypsum Creek Bicycle Path ▶ existing 10' pathway north on Webb Road ▶ the Oz Rural Recreational Loop ▶ connects directly into the City of Andover's proposed pathways system.

A portion of this vital link, Woodlawn to Webb Road, has been completed.

CORRIDOR G: HIGHWAY 42 — 23 MILES

History	▶ The 1989 Wichita Metropolitan Area Comprehensive Bicycle Plan identified a proposed bicycle path along Highway 42 out to Tyler Road. ▶ The 1991 PROS Plan also identified an exclusive bike trail along the K-42 extending six miles from the Arkansas River Trail to Tyler Road, in conjunction with the abandonment of the Santa Fe Railroad. ▶ According to KDOT, the railroad along the K-42 corridor from the K&O junction near West Street and Pawnee Street to Clonmel was rail-banked in 1989. ▶ Continuing southwest into the county, the corridor was planned to be a rural arterial with paved roadway shoulders.
Roadway Classification	▶ **Freeway/Expressway** – the W Southwest Blvd/W Cessna Blvd section ▶ **Minor Arterial** – from Maize Road/103rd W to the Sumner County line
Traffic Volumes	▶ **11,000 – 24,000 ADT** on the freeway section ▶ **8,000 – 9,000 ADT** on the minor arterial
Existing/Planned Facilities	**Rail-Banking Project** ▶ Construct a shared-use path within the rail-banked corridor **Paved Shoulders** ▶ Shoulders exist along the roadway and should be maintained for bicycle use.
System Connectivity	A pathway following the K-42 corridor will offer the following regional connections: ▶ existing Arkansas River Trail ▶ potential future public-access pathway along The Big Ditch ▶ access to Cessna and the Wichita Mid-Continent Airport ▶ potential pathways along the Cowskin Creek and Lower Dry Creek ▶ linkage to the community of Viola and into Sumner County

CORRIDOR H: COWSKIN CREEK TRIBUTARIES 65 MILES

History	The Cowskin Creek Basin Watershed is comprised of the Cowskin Creek, Upper Dry Creek, Lower Dry Creek and their tributaries. All three watersheds cross jurisdictional boundaries, include rapidly changing land use characteristics, multiple urban and rural water needs, and present increased flooding concerns. In 2005, the Andale Area Chamber of Commerce prepared a plan to combine the three watersheds into a single basin project to comprehensively devise a method to reduce regional flooding problems.
Potential Strategies	Combined multiple regional goals for recreation, transportation, flood control, and preservation of natural resources by developing pathways along protected stream corridors. Create a regional plan that represents agricultural, urban, and business watershed interests by addressing the following issues: ▶ Identify a way to protect streams, allow for preservation and identify best connection routes. ▶ Develop a mechanism to protect that can be combined with regional non-motorized transportation connections as well as recreational uses. ▶ Acquire rights to public access. Existing pattern of development with small farms/building encroachment complicates access issues. ▶ Develop a comprehensive funding mechanism.
Benefits of multi-purpose Corridor Protection	In addition to making pathway system connections, multi-purpose waterway corridors offer the following to the region: ▶ preserve and enhance wildlife habitat areas and connect wildlife corridors ▶ preserve sensitive open spaces that naturally buffer adjacent water features (streams, rivers) ▶ help with the absorption of runoff to reduce flooding ▶ protect stream banks from eroding and help remove pollutants ▶ Reserve community amenities such as creeks, lakes, and rivers for public use ▶ enhance human access to the natural environment ▶ Potential for increased heritage tourism for locations along waterways ▶ potential to develop lakes that can be used to reduce flooding and serve multi-purpose needs ▶ provide scenic walkways ▶ preserve community character ▶ create a collective method for all communities to manage surface water ▶ enhance property values

CORRIDOR I: THE BIG DITCH — 21 MILES

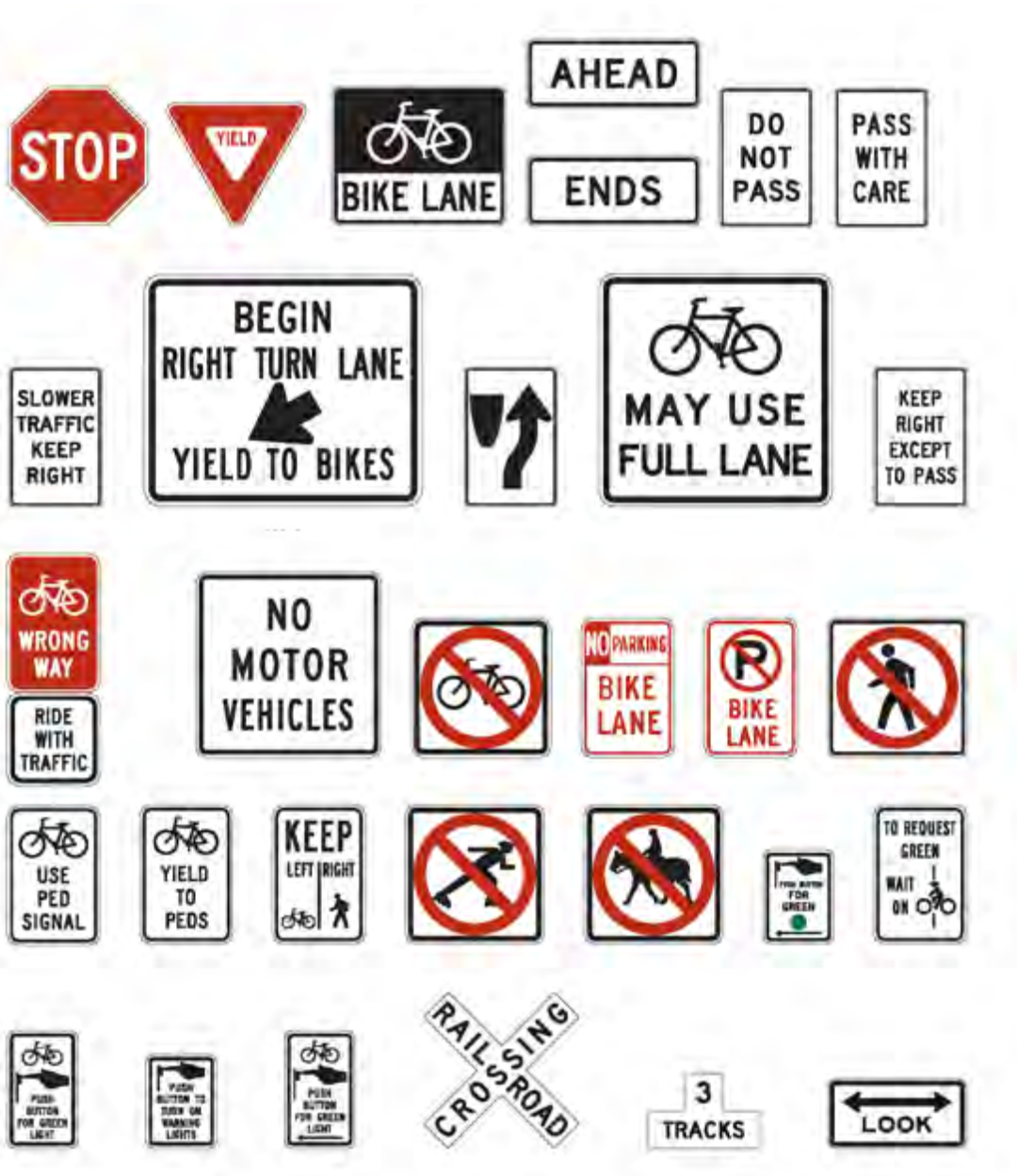
History	▶ The Wichita-Valley Center Flood Control Project was a joint undertaking of the U.S. Army Corps of Engineers, Sedgwick County, City of Wichita, and City of Valley Center, completed in the 1950s. ▶ The 750 to 1,500 foot wide floodway is maintained by City of Wichita Public Works. ▶ A 1979 challenge to the City of Wichita rights to use the property for ATV and other uses was denied by the courts citing that the original easement use was for flood control only. ▶ City of Wichita subsequently purchased public access rights on limited portions of the corridor.
Potential Strategies	The Big Ditch provides the ideal scenic location for shared-use path along its levees. However, easement issues and engineering issues could be factors that make this infeasible. This strategy should be viewed in the long term and is dependent upon addressing the easement and engineering concerns.
Issues	▶ The easement issue must be resolved before the Big Ditch can have multiple uses. ▶ U.S. Corps of Engineer regulations regarding floodway facilities typically allow the following recreational uses: o Surfaced walkways along the top, outside toe, and between the top of the channel bank and inside toe. o Surface access ramps on the inside slop and outside slope. o Landscape modification 30 feet from the outside toe levees. ▶ The Board of County Commissioners currently promotes a multi-use concept for the floodway and recognizes potential to create a regional park that may include some of the flood control area. ▶ The possibility of using the Big Ditch as a pathway corridor will continue to evolve and is discussed further in the Emerging Issues section of this plan.
System Connectivity	A change in the Wichita-Valley Center Flood Control Project could provide regional pathway system connectivity from the City of Valley Center to the Western side of the City of Wichita and to the communities of Haysville and Derby.

CORRIDOR J: ARKANSAS RIVER PATH — 46 MILES

Existing Segments	▶ A 10-foot wide pathway currently exists along the west bank of the Big Arkansas River from I-235 to Broadway, then crosses the river's east side and continues south to Garvey Park. ▶ Pathways have been developed along both river banks for the section from 13th Street to Maple. ▶ Along the route, several shorter segments of pathway have been constructed and others are planned to provide neighborhood connections to this major spine facility.
Existing/Planned Facilities	**Watershed Protection** ▶ Northwest of I-235, a greenway trail has been proposed since 1996. Protection of a riparian buffer corridor for joint purposes of watershed management and public access is needed. **Multi-Use Path** ▶ The South Central Neighborhood plan recommends the extension of a trail link along the east bank of the Arkansas River, connecting to the existing trail sections to the north. This link would include a pedestrian bridge across the river connecting Herman Hill Park to Watson Park. ▶ The 1996 PROS Plan also showed planned trail facilities south of Chapin Park to the confluence of the Arkansas River and the Big Ditch. From this point south, the trail is proposed to detour over to Hydraulic/16th, cross the river, and continue along the west side of the waterway into Sumner County. ▶ A shared-use path along the East bank of the Arkansas River from the John Mack Bridge (Broadway) to the Waterwalk was included in Metropolitan Transportation Plan (MTP) 2035. This could be a potential link to Corridor F (Mount Vernon).
System Connectivity	In total, the Big Arkansas River runs about 51 miles through Sedgwick County from its northern to southern borders. While developing a continuous waterway-based trail facility for this length is a very long-term project, at completion the corridor will intersect with almost every east/west route proposed in the regional system. As such, this pathway will become major destination in and of itself, and several shorter, secondary neighborhood connections will be desired to be made to access this facility.

	Issues with ownership rights along the Arkansas River may prove to be problematic. The ability to gain access and easements along the river will be difficult. As such, this corridor will need to receive additional consideration and has been included in the Emerging Issues of this plan.

MUTCD Regulatory Signs and Plaques for Bicycle Facilities (2009)



CORRIDOR K (1): HAYSVILLE CONNECTION 5 MILES

System Connectivity	This proposed 8-mile primary corridor will connect the City of Haysville to the Arkansas River Trail and the City of Wichita bikeway system along the following segments of previously proposed biking and walking facilities and new alignments:
Potential Strategies	**Multi-Use Path** ▶ extending from the Arkansas River Trail through O.J. Watson Park. **Road Diet or Sidepath** ▶ along McLean Blvd to 31st Street **Signed Shared Roadway (Bike Route)** on Gold Street. **Multi-Use Path** ▶ continuing south of Grove along ditch to Union Pacific Railroad. **Rail-with-Trail** ▶ along a segment of the Union Pacific Railroad to Southern. This short segment of rail-with-trail will require barrier fencing to separate trail users from active rail use and address the railroad company's liability concerns. **Signed Shared Roadway (Bike Route)** ▶ on Southern to 63rd. **Multi-Use Path** ▶ along the railroad and Big Ditch rights-of-ways to make short connection over to Seneca. **Sidepath** ▶ along Seneca connecting to the Haysville shared-use path on Seneca that ends at Karla.

CORRIDOR K (2): MARKET OR TOPEKA 6MILES

Routing Options:	
Roadway Classification	▶ Main: **Urban Collector** ▶ Broadway: **Minor Arterial** ▶ Topeka: **Urban Collector**
Traffic Volumes	▶ Main: **1,000 – 11,000 ADT** ▶ Broadway: **10,000 – 16,000 ADT** ▶ Topeka: **1,000 – 6,000 ADT**
Future Planning	The affected local jurisdiction shall determine which street corridor to route in and appropriate facility recommendations to implement the intent of this primary north/south bicycling route through Downtown Wichita.
System Connectivity	Developing any one of these corridors as a continuous on-street bicycle facility will provide links to the following: ▶ existing Redbud Trail ▶ existing Historic Midtown Bikeway/Greenway ▶ proposed bicycle facilities on Waterman ▶ 1st and 2nd Street existing bike lanes

CORRIDOR K (3): WICHITA – VALLEY CENTER BNSF LINE 7.5MILES

History	The 21st Street Revitalization Corridor Plan proposes the realignment of the BNSF mainline and rail yard activities from its current location along Broadway to the existing Frisco main that is also owned by the BNSF Railroad. This recommendation in the proposed 21st Street Plan, to shift the railroad activities away from Broadway, is part of a solution to limit the number of at-grade rail crossings in North-Central Wichita. ❖ In March 2003, the BNSF Railway proposed to abandon approximately 17 miles of track between Wichita and Valley Center. The City of Wichita was interested in negotiating rail-banking with BNSF for the portion of the line that runs from 45th St near Park City to west of Meridian in Valley Center. ❖ BNSF is now keeping part of this corridor in active rail service, with two sections of the route abandoned in July 2006, totaling 5.65 miles. ❖ Adjacent land owners have raised property ownership issues along sections of the corridor. ❖ Future connections north of 13th St. to the southern terminus of the proposed abandonment will be tricky, most likely following Broadway. Another alternative to explore would be to route on Market Street from 13th to 35th, crossing Broadway and the railroad at 37th, and continuing north on Old Lawrence Rd. ❖ Park City is exploring alternatives for connections along an adjacent railroad spur as well.
System Connectivity	Converting the Wichita–Valley Center BNSF line into a rail-trail is a long-term project that would ultimately provide regional linkage between Wichita, Park City, and Valley Center, with connections to the following primary pathways corridors: ▶ continuation of the north/south corridor (Corridor K) proposed for either Main, Broadway or Topeka ▶ future 53rd N bicycle - Corridor B ▶ intersects with the OZ recreational loop ▶ connects into the Valley Center's existing and proposed pathway system

CORRIDOR L: CANAL HIKE AND BIKEAND EXTENSION 12 MILES

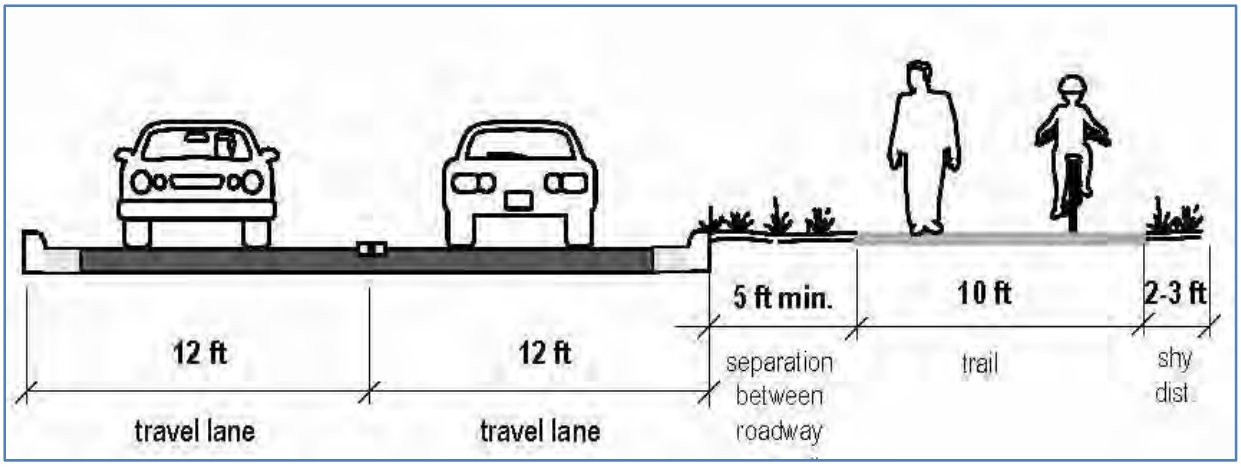
Status	**Complete**
Existing Segments	**Canal Hike and Bike Trail** Existing facility beneath or parallel to I-135 running from 17th Street N to Pawnee. **The Dr. Dye Park to Chisholm Creek Park Bike Path** This segment meanders roughly parallel to K-96 from Grove Park near the I-135 interchange, to Chisholm Park off Woodlawn. **McAdams Shared-use path** Connects the Canal Route shared-use path to K-96 pathway. **Southern Link** South of Pawnee connecting the southern portion of the Canal Route shared-use path to the Gypsum Creek shared-use path system.
Missing Segments	**Multi-Use Path** ▶ There is a missing section between the western terminus of the Grove Park to Chisholm Creek Park Bike Path to the northern terminus of the Canal Hike and Bike Trail. ▶ Another link to be made is an extension south of Pawnee along Southeast BLVD/Atchison, Topeka and Santa Fe RR to link to the three proposed trails that converge near the Kansas Turnpike/I-35 crossing of the Arkansas River.
System Connectivity	This major 9-mile corridor, when completed in its entirety, will provide bicycling links to the following, starting at its southern terminus: ▶ Arkansas River Trail ▶ Gypsum Creek extension ▶ proposed east/west bike lanes along Mount Vernon ▶ proposed east/west bike lanes along Douglas ▶ rail-banked BNSF 17th St corridor ▶ proposed Redbud Trail ▶ existing Grove Park, Chisholm Creek Bike Path and the K-96 bike Path

CORRIDOR M: K-96 BIKE PATH AND EXTENSION 14.5 MILES

Existing Segments	**The K-96 Bike Path** Runs from Woodlawn east to 127th Street E.
Missing Segments	**Signed Shared Roadway (Bike Route and Multi-Use Path** ▶ The City of Wichita identified an alignment from the southern terminus of K-96, west on Central then south on Greenwich to connect to an already existing shared-use path that connects to Harry.
System Connectivity	This major 14-mile corridor, when completed in its entirety, will provide links to the following, starting at its northern terminus: ▶ Proposed Canal Hike and Bike connection ▶ proposed north/south bike lanes on Oliver – Corridor N (2) ▶ Oz recreational loop ▶ rail-banked BNSF 17th Street corridor ▶ Redbud Trail ▶ proposed east/west bike lanes along Mount Vernon - Corridor F (1)

CORRIDOR N (1): OLIVER STREET NORTH OF K-96 9 MILES

Roadway Classification	▶ **Urban Collector** – from northern Urbanized Area Boundary to Wichita city limits (5 miles) ▶ **Minor Arterial** – from the Wichita city limits to K-96 (4 miles)
Traffic Volumes	▶ **<8,000 ADT**
Future Planning	The affected local jurisdictions shall determine appropriate facility recommendations to implement the intent of this primary bicycling corridor.
System Connectivity	Developing a continuous north-south corridor will provide bicycling links to the following: ▶ Bel Aire and Kechi into Wichita ▶ numerous local commercial nodes ▶ proposed east/west bike facilities along 53rd ▶ existing K-96 bike path ▶ existing Grove Park to Chisholm Creek Park bike path



CORRIDOR N (2): WOODLAWN – 13TH N – EDGEMOOR 8MILES

Roadway Classification	▶ **Principal Arterial** – Woodlawn, from K-96 to 13th N (2 miles) ▶ **Minor Arterial** – 13th N., from Woodlawn to Edgemoor; Edgemoor, from Central to Harry (3 miles) ▶ **Urban Collector** – Edgemoor, from 13th N. to Central; Edgemoor, from Harry to Mount Vernon (1 mile)
Traffic Volumes	▶ **4,000 – 24,000 ADT** – with volumes >20,000 at the intersections on Woodlawn with 29th N., 21st N., and 13th N.
Future Planning	The affected local jurisdictions shall determine appropriate facility recommendations to implement the intent of this primary corridor.
System Connectivity	Developing a continuous north-south corridor will provide bicycling links to the following: ▶ numerous local commercial nodes ▶ proposed extension of the Redbud Trail ▶ proposed east/west bike lanes along 1st and 2nd Streets ▶ proposed east/west bike lanes along Mount Vernon ▶ existing Gypsum Creek Bicycle Path ▶ Spirit Aero systems major employer

CORRIDOR N (3): OLIVER – BUCKNER – MEADOWLARK – ROCK ROAD 14.5 MILES

Status	**Existing facilities** ❖ Derby: on Patriot from Buckner to Rock, along Rock to Woodbrook ❖ Mulvane: on Rock from 103rd to Louis
Roadway Classification	▶ **Principal Arterial** – Buckner, from 55th to 63rd; Rock Road, from Meadowlark to K-15 ▶ **Minor Arterial** – Oliver, from I-35 to Buckner; Buckner, south of 63rd; Meadowlark/71st
Traffic Volumes	▶ **5,000 –10,000** – Oliver ▶ **4,000 – 8,000** – on Rock Rd between Derby and Mulvane
Potential Strategies	Multi-Use Path Continue existing sidepath treatment found along Buckner/Meadowlark/Rock Road within Derby and Mulvane. Work with Spirit Aero systems for accommodation through their campus.
System Connectivity	Making connecting between existing pieces of biking and walking facilities up to Oliver will link the following: ▶ the communities of Mulvane, Derby, and Wichita ▶ local destinations within individual communities ▶ the 100-mile Oz Rural Loop ▶ Spirit Aero systems major employer ▶ existing Gypsum Creek Bicycle Path ▶ proposed north/south bike lanes along Oliver

CORRIDOR O: GYPSUM CREEK SHARED-USE PATH 7 MILES

Existing Segments	A 10-foot wide multi-use path has been constructed along the Gypsum Creek from Douglas south to 31st St S.
Status	The City of Wichita received a Transportation Enhancement (TE) grant for this project. It is currently in design phase with anticipated completion date of 2013.
Existing/Planned Facilities	**Multi-Use P** There is an approximately 3-mile missing link in continuing this facility westward to connect with the Arkansas River Trail. The Wichita park and Recreation Department is actively planning this connection to create a continuous 45-mile greenway trail facility around southern Wichita, from roughly I-235 and 21st Street N around to Armour and Douglas Streets. This shared-use path will connect the southern portion of the Arkansas River trail to the southern portion of Corridor L which links to the Canal Route multi-use system.
Routing	The pathway extension will continue from the southern terminus of the existing Arkansas River Path at Garvey Park, routing on the southern edge of Chapin Park and along the eastern side of I-35/Kansas Turnpike, to connect with the existing southern terminus of the Gypsum Creek Bicycle Path at Planeview Park.
System Connectivity	This segment links two major existing facilities, the Arkansas River Trail and the Gypsum Creek Bicycle Path, and provides intersecting connections to other primary corridors including: ▶ proposed north/south bike lanes along Oliver ▶ extension southward of the Canal Hike and Bike Trail that was completed in 2010 ▶ future extension southward of the Arkansas River Trail – Corridor J ▶ proposed Haysville connection ▶ this connection will help create a continuous 45- mile loop around southern Wichita

CORRIDOR P: WEBB ROAD 4 MILES

Roadway Classification	**Principal Arterial**
Traffic Volumes	**< 9,000 ADT** from K-96 north to Highway 254 on a four-lane cross-section **14,000 – 30,000 ADT** between K-96 and Pawnee on a four-lane cross-section. **< 6,000 ADT** south of Pawnee on a two-lane rural cross-section.
Existing/Planned Facilities	**Sidepath** Sections of sidepath are existing along Webb Road from Pawnee to Harry and on Greenwich Road from Harry to just south of Kellogg. The City of Wichita proposed to continue the Greenwich connection to Central, running east on Central with possible connection to the K-96 shared-use path (Corridor M). **Future Bicycle Accommodation** As growth and development continue north along Webb, the sidepath treatment should be continued. Ideally, on-road accommodation for bicyclists would be provided in a corridor like this, but Webb is already built to the four-lane cross-section in undeveloped areas between K-96 and Highway 254. Due to the sprawling land development patterns, fast speed of traffic, and excessive width of the roadway corridor, a sidepath with limitations on intersection conflicts may be the only solution.
System Connectivity	Retrofitting Webb to become more of a multi-modal corridor will provide bicycling links to the following: ▶ proposed extension of the Redbud Trail ▶ proposed Douglas on-street bike lanes ▶ existing 10’ wide bike path east along Kellogg ▶ existing 10’ wide bike path along Webb ▶ existing 10’ wide bike path west along Pawnee ▶ proposed 10’ wide bike path east along Pawnee ▶ existing bicycle and pedestrian facilities trail west along Pawnee ▶ existing bicycle and pedestrian facilities on Harry

CORRIDOR Q: WHITEWATER RIVER WATERSHED 7 MILES

History	**The Whitewater River Watershed** in Sedgwick County is located within the upper regions of the Walnut River Basin, which contains other stream corridors such as Wildcat Creek, Whitewater River, and Eight Mile Creek. The watershed is 52% cropland grassland, 43% grassland, 2% tree-lined, and 2% urbanized. The Kansas Water Office projects the watershed to grow 37% from 200 to 2020. Several streams within the watershed are polluted from agricultural practices and runoff. The State is currently monitoring the water quality in many of the streams. There also have been several methods recommended for protection of the streams such as conservation tillage, contour farming, grass waterways, and buffer strips.
Potential Strategies	▶ Combine multiple regional goals of recreation, transportation, flood control, and preservation of natural resources by developing pathways along protected stream corridors. ▶ Create a regional plan that represents agricultural, urban, and business watershed interests by addressing the following issues: o Identify ways to protect streams for preservation and decide best connection routes for multiple uses. o Develop a mechanism to protect that can be combined with recreational uses. o Acquire rights to access; existing pattern of development with small farms/building encroachment complicates access issues. o Develop a comprehensive funding mechanism.
Benefits of Multi-Purposed Corridor Protection	In addition to making pathway system connections, multi-purpose waterway corridors offer the following to the region: ▶ Preserve and enhance wildlife habitat areas, and connect wildlife corridors. ▶ Preserve sensitive open spaces that naturally buffer adjacent water features (streams, rivers). ▶ Help with the absorption of runoff to reduce flooding. ▶ Protect stream banks from eroding and help remove pollutants. ▶ Reserves community amenities such as creeks, lakes, and rivers for public use. ▶ Enhance human access to the natural environment and provide scenic walkways ▶ Potential for increased heritage tourism for locations along waterways. ▶ Create a collective method for all communities to manage surface water. ▶ Preserves community character and enhances property values.

Primary Corridors vs. Missing Links

The previous section of this plan identified a comprehensive system of primary corridors for implementation by year 2035. This chapter identifies 17 short segments of those corridors that are desired to be completed by year 2020 to create a basic system for the region following these objectives:

- Complete missing segments of off-road pathways.
- Develop initial on-street bicycle lanes in moderately traveled roadway corridors that link to existing off-road pathways.
- Take advantage of development opportunities at community fringes to make pathway connections between jurisdictions.

Actions to complete the missing links are occurring, albeit not as quickly as anticipated. Lack of funding to build and extend pathway facilities has slowed pathway development; however, two missing link segments identified in the 2007 RPSP were completed. A one mile section of shared-use path along Pawnee St. (corridor F) now fills the gap between Woodlawn St. and Rock Road. A 1.5 mile gap between 17th and 29th streets now connects the K-96 Trail to the Canal Hike Bike Trail.

The following action plan therefore represents areas where public investments should continue to be focused based upon need. These implementation priorities will need to be balanced with opportunities and a commitment by local communities to fund and support project development.

Local vs. Regional Priorities

Urban areas over 50,000 populations are required by federal statute, as a condition for spending federal highway or transit funds, to designate a Metropolitan Planning Organization (MPO) to assume responsibility for planning, programming, and coordinating federal transportation investments.

The mission of the Wichita Area Metropolitan Planning Organization (WAMPO) is to provide staffing, research, and policy analysis on a wide variety of transportation issues in the region. WAMPO has no regulatory powers, but focuses on intergovernmental cooperation and coordination. WAMPO recommends, but does not implement plans and programs. It also provides review and comment on local applications for federal and state funds.

In this manner, the WAMPO Regional Pathway System Plan represents a document that both incorporates local projects and recommends projects to local jurisdictions. Completion of the 17 missing links identified as regional pathway priorities is recommended to create connections between communities and facilities.

Individual jurisdictions may have their own list of pathway priorities internal to their community, but should also work to fund and build the identified facilities that will connect them

with their neighbors and provide longer distance travel options for residents of the region. Experience in other regions has shown that placing initial investments into a system of primary travel corridors spurs additional use and support for other, smaller pathway improvements as both the regional and individual community pathway networks grow and mature over time.

Map Details

The Action Plan for completing priority missing links is presented on pages 4-4 through 4-8. This short list of 17 projects (map on following page) was developed by examining gaps between existing pathway facilities that occur within the primary pathway corridors

Many of the missing links are projects already planned by local jurisdictions. Others are new recommendations needed for regional connectivity. Many cross jurisdictional boundaries and will require multi-community and multi-agency cooperation and coordination to implement.

Short List Action Plan of Regional Missing Links

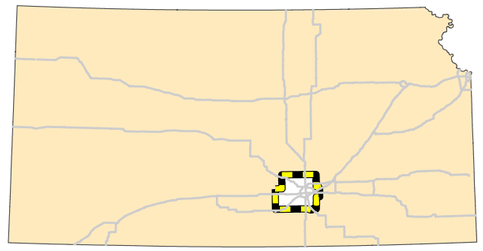
This plan's 24 identified primary corridors (see map on page 2-6.) represent a skeletal pathway system that the region should strive to complete to provide a minimal network of non-motorized accommodation by 2035. It totals 351 miles of facilities - 90 miles of new trails, with an additional 101 miles if watershed protection corridors are created, plus 69 miles of designated on-road facilities and 89 miles of incidental shoulder improvements. This skeletal system is more achievable than the 421 miles of new trails currently shown in other existing plans with no prioritization, and provides enhanced connectivity with linkages to major destinations. Over time, the number of pathway corridors may be increased to reflect the need for such facilities, as well as connectivity with other trails within the region and to those pathways connecting the region to areas of the state.

Connectivity

"Sometimes you just can't get there from here. Without connectivity you just have a trail and not a trail system."
--Cathy Barrett, Avid Omaha Cyclist.

All 24 primary corridors will be important to implement, but this still represents a fairly large undertaking for the region. To further focus in on those projects that are desired to be undertaken immediately to provide a basic level of connectivity by year 2020, the following 17 missing links represent 80 miles critical for priority implementation. Each priority missing link is identified on the map on the following page and described in detail following, including rough ball-park cost estimates for completion.

WAMPO is not being prescriptive in the facility types listed in this section. Rather, the projects listed were selected to fill gaps in the existing pathway system. Meanwhile, each of the facility types listed represents a typical project scenario and is shown for illustrative and cost estimation purposes.



Legend

Priority Missing Links

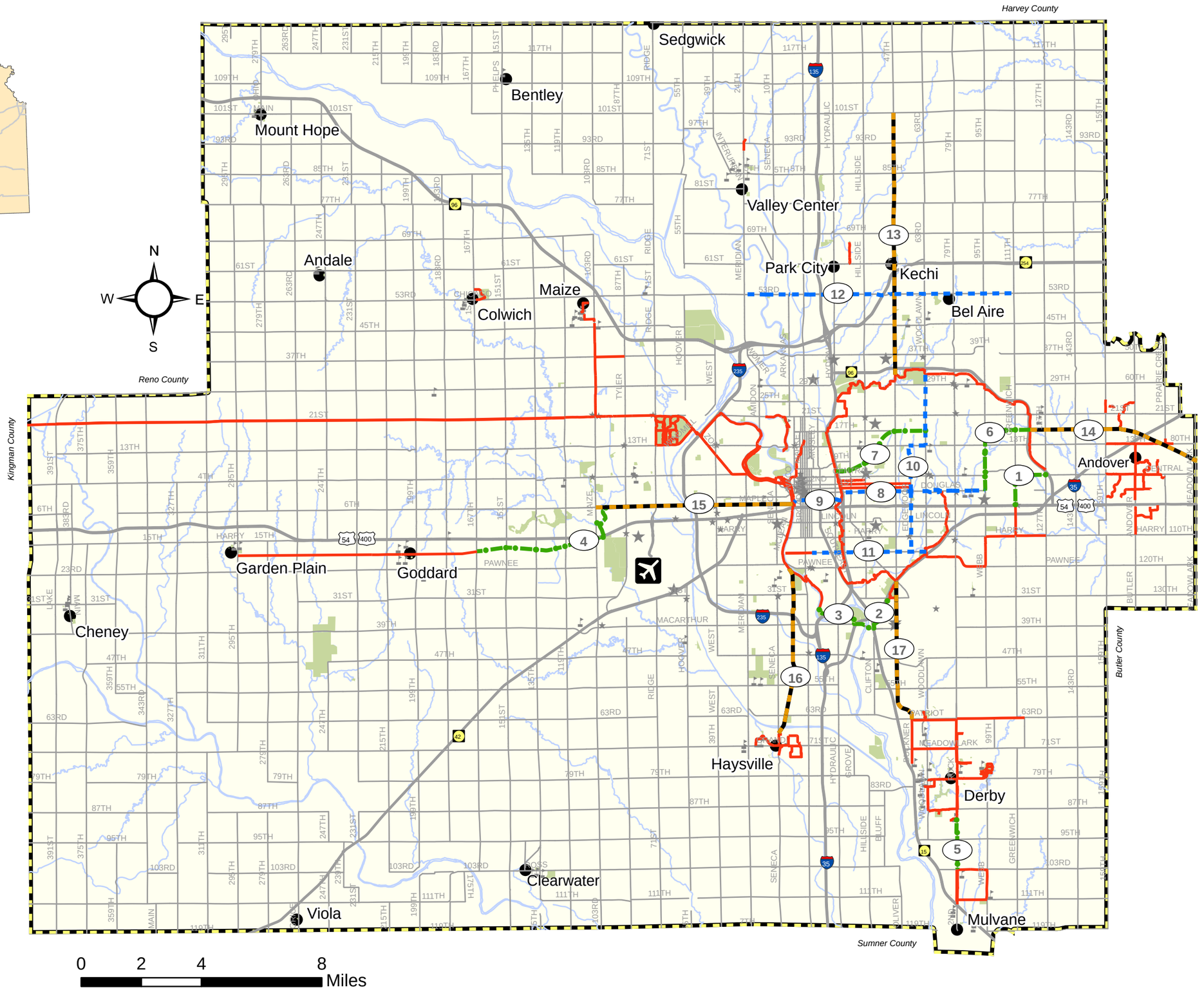
- Off-Road Trail Link
- Roadway Corridors that Link Trail
- Community Connection

Existing Facilities

- Existing Facility

- Wichita Mid-Continent Airport
- School
- Major Employer
- Minor Employer
- City
- Highway or Interstate
- Arterial Street
- River or Stream
- Park
- WAMPO Planning Boundary

WAMPO



Wichita Area Metropolitan Planning Organization
271 W 3rd St., Ste. 208,
Wichita, KS 67202
316 779 1321

STRATEGY #1:
Complete short missing multi-use trail links between existing off-road pathways to form a continuous 45-mile trail loop.

1. **Corridor M: Extension south from current K-96 Bike Path terminus at 127th E. to the intersection of Harry and Greenwich.**
   A 2-mile section of trail or on-road bicycle accommodation is needed along 127th E. from the K-96 Bike Path terminus south to Harry Street. To avoid conflict issues with K-96 and the I-35/Kansas Turnpike, the City of Wichita has chosen to route this connection from K-96, west one mile on Central and then south 1 mile along Greenwich to connect with the existing trail at Harry and Greenwich.

   Estimated cost to be between $316,800 - $422,400.

2. **Corridor O: Gypsum Creek Bicycle Path extension from 31st S. to the Atchison, Topeka, and Santa Fe Railroad.**
   The current terminus of the Gypsum Creek Bicycle Path in Planeview Park would be extended southwest to link to other trail facilities in the vicinity of I-35, K-15 and E. MacArthur Road. The City of Wichita is actively planning this 1.5-mile missing link along the eastern side of the I-35/Kansas Turnpike exit, which will ultimately extend to Garvey Park as part of Corridor J. Estimated cost is approximately $660,000 for design and construction using the existing bridge on MacArthur Road to cross the river.

3. **Corridor J: Big Arkansas River Path extension east to link with the Gypsum Creek Bicycle Path extension.**
   The City of Wichita is actively planning this 2-mile missing link of a 10-foot multi-use pathway from Garvey Park to the I-35/Kansas Turnpike. Estimated cost: $633,600

STRATEGY #2:
Extend existing off-road trails to link with other facilities or ones currently in the process of being developed for public use.

4. **Corridor E: Rails-to-trails segment from 167th W. to 103rd W., with a creek-side trail up to Maple Street.**
   Eight miles of the former Central Kansas Railway from 167th to 295th has been developed by the Prairie Travelers advocacy group and the City of Goddard as the Prairie Sunset Trail. The next phase should continue this rail-to-trail project 4.5 miles east to the Pawnee Prairie Golf Course. From here, a 1-mile multi-use pathway under W. Kellogg Drive along the Cowskin Creek will link to the roadway network at Maple Street.

   Estimated cost of rail-to-trail: $475,200 - $712,800. Estimated cost of Cowskin Creek Connector: $316,800 – $422,400.

5. **Corridor N (3): Rock Road connection between Derby and Mulvane.**
   This 1.5-mile missing segment between Rockhill and 103rd S. will connect sidepath facilities that exist along Rock Road in both the City of Derby and the City of Mulvane. Mulvane has paths on both sides of Rock Road. In Derby, a sidepath is on the west side from Woodbrook to 87th, then on both sides north to Osage. Estimated cost of sidepath would be between $475,200 - $633,600.

6. **Corridors D and P: Connection from the K-96 Bike path to Douglas Avenue and the northern terminus of the Gypsum Creek Trail.**
   Complete at an estimated cost of $258,400-358,400 1.5 miles of the 17th Street/BNSF "Redbud Trail" from the K-96 Trail to Webb Road. This connection will also involve completing proposed sidepath facilities along Webb Road for a distance of 2 miles at a cost of $633,600 - $844,800 (assumes additional design at drive crossings).

7. **Corridor D Redbud Trail: Hike & Bike Trail through the Ken-Mar Neighborhood.**
   Develop an initial section of the 17th Street/BNSF "Redbud" Trail through the Ken-Mar Neighborhood, ideally spanning between Corridor L and Corridor N. This will provide valuable linkages and serve as a community development project to assist in neighborhood revitalization efforts.

   Estimated cost is $664,800 – $796,000 for 2.5 miles which includes pedestrian-controlled lights, signage, and pavement markings for each street crossing; may include a diagonal crossing over 13th Street, which may involve a site-specific engineering design at additional cost. The City of Wichita will need to determine exact start and end points for this pilot project based upon implementation feasibility.

   The City of Wichita has identified funding for this project and is working on design for the segment between the Canal multi-use trail (Corridor L) and Oliver.

STRATEGY #3:
Implement facilities within roadway corridors that provide direct links to connect existing off-road trails.

8. **Corridor E (3): Douglas Avenue bicycle lanes from the Canal Hike and Bike Trail to Webb Road.**
   A recommended roadway retrofit project to restripe 4.8 miles of Douglas Avenue from US-81/I-135/K-15 to Webb Road at an estimated cost of $57,600. The City of Wichita will need to assess the feasibility of this recommendation with other alternatives to meet the intent of creating a primary corridor along Douglas Avenue. The City of Wichita is currently updating their Bicycle Master Plan and is considering additional options to make trail improvements along this corridor consistent tithe the Wichita Downtown Master Plan and the Douglas Street Transit Oriented Development (TOD) study currently underway.

9. **Corridor E (3): Segment through Downtown Wichita connecting the Canal Multi-use Trail with the Arkansas River Path.**
   This 2-mile segment represents a critical link in the regional system to provide an east/west bicycle connection between trail projects through Downtown Wichita, as well as much-needed east/west access to major destinations and employers located in the region's center. The consultant's proposed pilot project includes striping on-street bicycle lanes on Waterman Street, its western terminus at the Canal multi-use trail/I-135, and the railroads. Striping these facilities would cost $24,000.

   Through the developing Arena Neighborhood, ideal accommodation would be a test project to stripe bicycle lanes and allow for on-street parking on the Waterman cross-section. If this is determined not feasible, an alternative routing will need to be accommodated within the development plans to connect to the Maple Street bridge over the Arkansas River. The City of Wichita will need to assess the feasibility of this recommendation with other alternatives to meet the intent of creating a primary east/west corridor through Downtown.

10. **Corridor N (2): Accommodation along Woodlawn and Edgemoor through the City of Wichita from the K-96 Trail to Mount Vernon.**
    As an alternative to bicycle accommodation on Oliver/47th Street E. through the City of Wichita, the City's desired route will jog over to utilize parts of the Woodlawn, 13th Street, and Edgemoor corridors, with facility type(s) to be determined.

11. **Corridor F (1): Connection on Mount Vernon between the Arkansas River east to the Gypsum Creek Bicycle Path.**
    Develop on-street bike lanes on Mt. Vernon to link to the Arkansas River Path, the Canal multi-use trail, the Gypsum Creek Path, and Pawnee/Woodlawn. Cost for Mt. Vernon restriping for a distance of 4.5 miles: $54,000. A one mile section of on-street bike lanes on Mount Vernon is complete between Broadway and Greenway Boulevard.

    In conjunction, short segments of bike route should be signed on Drollinger to link to the Gypsum Creek Path, and on Greenway Boulevard to link to the W. Pawnee Street Bridge crossing the Arkansas River. Use of sharrow pavement markings may also be used to identify these routes.

STRATEGY #4:
Implement bicycle facilities within those corridors that directly connect outlying communities with each other and the City of Wichita.

12. **Corridor B: Park City/Bel Aire Connection along 53rd N.**
    The link along this minor arterial represents a future east/west growth corridor in the northern suburbs. The type of pathway facility to be provided will be determined based upon the growth patterns and types of land use to be developed along the corridor. Accommodations for walking and bicycling should be included as part of future infrastructure improvements.

13. **Corridor N(1): Kechi Connection along Oliver.**
    Future improvements to Oliver/47 E. north of K-96 should take into account bicycling and walking needs as part of future growth and resulting infrastructure enhancements. Type of accommodation to be determined with growth in the area. A wide shoulder currently exists on Oliver from just north of 37th Street N. to 53rd Street N. There currently are no bicycle facilities between K-96 and 37th Street N.

14. **Corridor D: 17th/BNSF "Redbud" Rail-Trail as the Andover Connection.**
    The City of Wichita, City of Andover, and Sedgwick County should focus on making connection between the local Andover pathway system and the K-96 Trail through development of an initial piece of the Redbud Trail. Estimated cost of 4 miles of trail construction on the former BNSF Railroad bed: $422,400 - $633,600.

15. **Corridor E (2): Garden Plain/Goddard/West Wichita Connection along Maple Street.**
    Consultant's recommendation for Maple Street would be to turn this roadway into a 6-mile multi-modal corridor by restriping lane configurations. Estimated cost to narrow the center turning lane of the 5-lane cross-section to add on-street bicycle lanes: $360,000. To restripe the 4-lane section to become a three lanes plus bicycle lanes: $288,000. The City of Wichita will need to assess the feasibility of this recommendation with other alternatives to meet the intent of implementing this primary east/west corridor.

16. **Corridor K: Haysville Connection.**
    This connection is proposed to be made using a variety of facilities including a 0.5-mile multi-use path from the Arkansas River Trail through Watson Park; segments of multi-use path to connect existing local streets; bike route signing posted on interconnecting street segments; and a potential rail-with-trail project along a short section of the Union Pacific Railroad to reach Seneca. Costs will be determined by exact routing chosen, right-of-way available, and length of new pathways constructed versus on-road routing selected.

17. **Corridor N (3): Mulvane/Derby Connection along Buckner/Meadowlark Road.**
    The existing sidepath treatment found along Buckner/Meadowlark/Rock Road or an on-street bicycle accommodation is desired to link to the Spirit Aerosystems Campus and connect with proposed bike lanes on Oliver. Estimated cost for 4.5 miles: Sidepath ranges from $1,425,600 - $1,900,800. Bike lane striping estimated at $54,000.

    In addition to completing the 19 previously identified missing links, progress on the following fifth implementation strategy shall also move forward within the 2020 planning timeframe:

STRATEGY #5:
Develop fine-grained bicycle and pedestrian transportation systems within each local community.

The bicyclist and pedestrian needs of the region cannot be fulfilled focusing exclusively on primary regional corridors greater than 5 miles in length. Recognizing that bicycling and walking are local, short-distance modes of transportation, more dense facility networks need to be developed within local communities where people and activities are located. These local networks will need to evolve over time and should be designed to feed into the designated primary regional corridors. Safe Routes to Schools should be a first priority for local community systems.

Big Ideas for Implementing Pathways in the WAMPO Region

The WAMPO Regional Pathway System Plan emphasizes the role of local support and involvement. Although WAMPO will be responsible for the plan's overall coordination, establishing local ownership and support is critical to its successful implementation. Coordination between various agencies and departments is a key component to effective local implementation.

This Plan highlights the ecological, recreational, and quality of life benefits that can be gained by preserving the land around waterways for open space and trails. To supplement open space corridors, the plan also advocates retrofitting (e.g. re-striping to include bike lanes) select roadways to accommodate all modes of transportation. Five general strategies for implementing the WAMPO Pathways Plan were identified and include:

STRATEGY #1: Establish Plan Ownership and Support

1-A. The Wichita Area Metropolitan Planning Organization (WAMPO) shall be responsible for the overall coordination of the Regional Pathways Plan. WAMPO will also receive, review, and rank applications for FHWA Transportation Enhancement (TE) funds. WAMPO will forward to the Kansas Department of Transportation (KDOT) a prioritized list of TE applications. KDOT, as administrators of this funding, will consider the regional priority of the TE list and will select, prioritize, and award funding for projects seeking Transportation Enhancement funds.

In support of the Plan, the Transportation Enhancement application process may be modified to recognize pathway projects that are consistent with the regional plan.

1-B. Local communities should develop pathways plans that provide local and neighborhood connections to the Regional Plan. Communities are encouraged to use the Regional Plan as they update their own comprehensive plans, transportation plans, and parks and open space plans.

1-C. Plan implementation shall be accomplished through local community transportation plans with support and regional oversight from WAMPO.

1-D. Citizen support for this Plan and its projects should be shown to the individual Cities responsible for implementation of its component parts.

1-E. Other implementation methods could follow an agency lead, public-private lead, and/or private sector lead model as described following:

- Local Planning and Community Development Departments or Parks and Recreation Departments often lead Agency Models. A community may also encourage multiple departments and agencies, such as its Parks and Recreation Department, Public Works Department, and Utility Districts to work together toward Regional Plan implementation.

- Partnerships that combine strong government leadership with private fundraising support, promotion, and programming are examples of Public-Private Models. Such models may also have strong private sides that take leadership roles with regard to planning, design, and system implementation; the public side then supports the private side with management, programming, and promotion.
- Private organizations, with their own means of system establishment and operation and no means of government influence, often characterize Private Sector Models.

Because Wichita area civic leaders are currently involved in various efforts (Visioneering Wichita's Economic Development Committee and Quality of Life Committee) and many citizens are active in existing advocacy groups (Prairie Travelers, bike clubs and walking/running clubs) a public-private partnership may be the most beneficial local implementation model to assist with the Regional Plan.

STRATEGY #2: Promote Interagency Coordination

2-A. Interagency coordination will be an important key to successful Plan implementation and should involve regular meetings with area agencies, communities, and groups, as well as the development of promotional materials to improve collaboration.

Promotional materials may include:

- Newsletters;
- A website;
- A regional map;
- Guest speaker forums for key topics;

A Top-Down, Bottom-Up Implementation Approach

The implementation strategies contained in this Action Plan are structured to provide a comprehensive long-range vision for completing a regional pathway system.

Some strategies require long-term shifts in policy focus and a regional commitment by all jurisdictions to uniformly work with individual land owners to preserve and protect corridors for future public access. Other strategies are small, short-term actions that can and should happen immediately to improve conditions for bicycling and walking.

The implementation strategies shall first be applied to complete prioritized segments of identified Primary Corridors. The same principles and strategies will also apply to shorter segments of secondary pathway corridors, community connections, and local Safe Routes to Schools projects. The plan provides guidelines for recommended implementation approaches applicable to all projects and jurisdictions, but not site-specific details for any one corridor.

It is important to remember that this plan is being prepared for the Wichita Area Metropolitan Planning Organization (WAMPO), who is in charge of regional transportation planning and the flow of federal and state dollars for transportation improvements.

However, implementation of any given project must be endorsed and initiated by the affected local jurisdiction(s). Implementation of each identified project will thus depend on a grass-roots swell of local support from citizens, neighbors, trail advocates, local staff and elected officials.

In addition, a standardized set of design approaches including the following may also be useful:

- Common Regional Pathways Signage Program;
- Standard Regional Logo for Identification Purposes; and
- Design and Construction Standards.

STRATEGY #3: Encourage Local Implementation

3-A. In order to increase local implementation of the Regional Plan, local communities could modify their Capital Improvement Programs to include items such as roadway re-striping, sidewalk replacement or widening, and American Disabilities Act (ADA) upgrades that are consist with the Regional Plan to further assist with its implementation. Moreover, communities should strive to build community support for revised street designs that use road diets and modified sidewalk standards for new roads. Each community may also survey its homeowners to learn more about their views on these issues.

3-B. Local agencies may also propose that major sewer and water utility easements become "pubic use" or "multi-use" easements rather than maintenance easements. They should also ensure that their parks, recreation, and open space plans include local pathways systems.

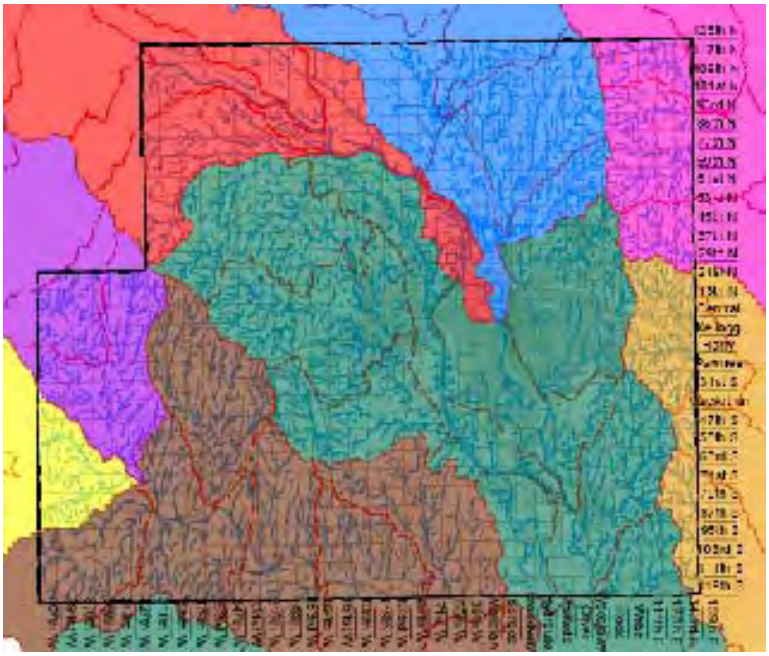
STRATEGY #4: Save Land Around Waterways

A primary goal of this plan is to provide strategies to improve the bicycle/pedestrian transportation network in the WAMPO region. One possible method is to combine this goal with strategies that provide preservation of waterways and to seek opportunities for such strategies. Such an action may provide a number of benefits including:

- Preserves and enhances wildlife habitat areas;
- Preserves sensitive open spaces that naturally buffer adjacent water features such as streams and rivers;
- Helps with the absorption of storm water runoff to reduce flooding;
- Prevents stream banks from eroding and helps remove pollutants;
- Reserves community amenities such as creeks, lakes, and rivers for public use and recreational opportunities;
- Enhances human access to the natural environment;
- Increases the potential for heritage tourism at locations along waterways;
- Provides scenic walkways;
- Preserves community character; and
- Enhances property values.

4-A. Work with watershed districts to preserve stream and river corridors. A watershed is an area of land that drains water into a particular creek, river, lake, or aquifer. Water drains downhill, so hills, ridges, and other high points define the boundaries of a watershed. Watershed districts are concerned with drainage problems, flood prone areas,

and potential mitigation strategies dealing with land use around streams and rivers. There are eight active watershed districts in Sedgwick County:



- Walnut basin
  - Upper Walnut River
  - Lower Walnut River
- Lower Arkansas Basin
  - Ninnescah
  - South Fork Ninnescah
  - North Fork Ninnescah
  - Middle Ark-Slate
  - Little Arkansas
  - Gar Pease

4-B. The City of Wichita Floodplain Management Task Force membership should be a natural ally of the pathways, bicycling, and walking community in saving land around waterways. There are also several not-for–profits around the Wichita area that are concerned about the preservation of waterways and water quality issues.

4-C. Identify sensitive assets, particularly along streams and other waterways, which should be preserved. Protecting these natural corridors may allow for the construction of multi-use paths, encourages conservation, and improves flood control. These efforts may be contracted at the regional level.

4-D. Make stream buffers part of overall parks and open space plans developed by local agencies. Acquire and conserve open space parcels with multiple potential benefits. Focus on private incentives, building local management capacity, and the acquisition and regulation of conservation lands.

4-E. Consider a stream setback or riparian protection ordinance. These ordinances ensure that streams in a watershed are lined with vegetation for a certain width, generally 100 – 150 feet from the centerline. The ordinance promotes vegetation,

recreation, utilities, agriculture, and wildlife habitats within the buffer, and reduces potential contamination and degradation.

4-F. Consider an "Alternatives Futures Analysis" to predict the likely economic and environmental outcomes of traditional development and watershed practices versus sustainable watershed management strategies. This type of analysis shall assist with decision-making and public education. For a link to an example of such an analysis for the Blackberry Creek Watershed in Illinois see:

http://www.co.kane.il.us/kcstorm/blackberry/ExecSummary.pdf

STRATEGY #5: Retrofit Roadways for Multi-Modal Accommodation

5-A. Create a regional street system that functions effectively for all modes of travel. Provisions should be made to better accommodate walking, bicycling, and transit, with the goal of increasing levels of use for these modes.

5-B. Consider adding on-street bicycle accommodation to identified primary regional corridors where recommended by the WAMPO consultant (see Appendix A) through one or more of the following means.

- **Restripe minor arterials**
  Allocate space for bicycle lanes by restriping existing roadways. A cost-effective means of accommodating bicycle travel, bike lanes may be implemented as a road diet treatment or by narrowing existing lanes. Restriping may be completed in conjunction with reconstruction, overlay, and/or routine restriping projects.
- **Construct new roadways**
  New and retrofit projects built to urban cross-sections should include bicycle lanes and rural roadways should include paved shoulders as an incidental part of construction projects.

Such enhancements should be routinely included as an incidental part of major traffic capacity construction projects programmed within the WAMPO region.

5-C. Post "*Share-the-Road*" warning signs on rural routes that receive high levels of use by cyclists. Such signs do not designate a corridor as a bicycle facility, but alert drivers to existing or potentially hazardous road conditions such as slow-moving vehicles.

5-D. Transform targeted bus routes into multi-modal corridors by providing the following:

- **Continuous sidewalks**
  Provide facilities that meet ADA requirements on both sides of bus route streets.
- **Convenient street crossings**
  Locate bus stops near intersections or providing mid-block crossings where pedestrians can safely and conveniently access transit service from both directions of travel.

- **Pedestrian amenities** Provide benches and shelters that offer comfort and support to transit system users.
- **Bicycle Parking** Place secure inverted-U parking at bus stops to enable people to combine travel modes for greater personal mobility.
- **Bike Racks on Buses** Install bicycle racks on all buses. Wichita Transit offers bike racks on all fixed-line buses. Addition research is needed to explore the opportunity to place bike racks on other transit and paratransit vehicles used in the WAMPO region.
- **Pedestrian Walkways** Encourage private properties to construct walkways that allow people to conveniently walk from transit stops to adjacent destinations.

Mobility Characteristics

While not undertaken for the entire WAMPO region, the 2006 Citizen Satisfaction Survey conducted for the City of Wichita by the National Research Center, Inc. most likely reflects modal split conditions throughout the region.

Survey results include:

What one method of transportation do you usually use (for the longest distance of your commute) to travel to work?

Single Occupant Vehicle	81%
Multiple Occupant Vehicle	14%
Public Transportation	1%
Walk	1%
Work at Home	1%
Other	0%

Ease of travel in Wichita?	% Survey Respondents Rating Good or Excellent:
By Car	67%
By Bus	17%
Bicycling	24%
Walking	41%

If the WAMPO Region desires to increase use of other transportation modes beyond motor vehicle trips, investment needs to be made to provide enhanced infrastructure and programs to support these modes.

STRATEGY #6: Explore Potential Funding Strategies to Supplement Available Enhancement Dollars

The Wichita Area Metropolitan Planning Organization (WAMPO) will provide overall coordination and planning for the Regional Pathways Plan and work with local communities on implementation. This includes assisting with funding to the extent possible. The WAMPO region has depended largely upon the federal Transportation Enhancement program to fund pathway projects in the past. However, many other funding possibilities exist. This section outlines several options available to jurisdictions in the state of Kansas.

6-A. The largest existing funding mechanism will be through local government tax revenues. Local governments which have a funding source will be able to leverage other funding sources such as private, federal, and/or state grants. Local agencies which

currently do not have a dedicated local revenue stream might consider working towards this type of resource.

6-B. Sometime in the future the WAMPO region may want to consider a regional funding strategy. Many recent voter initiatives around the nation have focused more on land conservation and open space preservation than on funding trail or pathway projects. Almost all of these examples have included opportunities for pathways.

6-C. The State of Kansas has already passed enabling legislation which allows for local governments to fund park, trail, and storm water management project themselves. Park, trail, and storm water projects have been combined into an overall plan and financed together successfully in other regions. Some types of financing options are as follows:

Property Tax
Property taxes are the primary revenue source for a municipality's general funds. These funds are used to complete public works projects including storm water management, pathways, and green infrastructure projects. However, many other public works projects such as roads, lights, and sidewalks are funded with the general fund. Schools are also funded with property taxes. These competing uses must be considered when choosing to use property taxes.

Local Sales Tax
Sales taxes are often viewed as positive local funding sources because consumers from other municipalities can help pay for needed infrastructure. Many communities have implemented sales taxes for a variety of needs and the perception is that the voters would not support additional taxes. Careful consideration of existing uses of sales taxes and potential future uses should be made.

"Some of the corridors and strategies (road diets) will be controversial but these are issues that WAMPO and other locals need to decide on how committed they are to a complete regional pathway system. FHWA would certainly support all these efforts."
--David LaRoche, P.E.
Safety/Traffic Engineer
Federal Highway

General Obligation Bonds
General obligation bonds are common funding methods used primarily for capital improvement projects and other capital outlays such as land and major equipment acquisition. Issuance of long term debt allows the municipality to finance large expenditures through loans which are repaid from revenues generated over a significant portion of the life of the acquired asset. Debt financing may enhance the equity of cost recovery, because new customers who benefit from the asset also help pay the cost associated with the asset.

Kansas Watershed Restoration and Protection Strategy (KS-WRAPS)
The State Water Plan Fund and Clean Water Act-Section 319 grants provide funding to local sponsors for WRAPS development, assessment, planning, and implementation of projects to supplement other available funding sources. Projects are funded on a priority basis considering state and local interests and project history.

Non-Point Source Pollution Control Programs
The Conservation Reserve Program (CRP) is a voluntary program that provides annual rental payments to agricultural producers to safeguard environmentally sensitive lands by planting long-term, resource conserving vegetation to control soil erosion, improve water quality, and enhance wildlife habitat. Program signups are held periodically. A continuous signup provision of the CRP provides funding for installing vegetative buffers and other practices to protect rivers and streams and other environmentally sensitive areas.

Additional Funding Possibilities
Other strategies used across the U.S. that could be implemented to various extents in the WAMPO region include: developer dedications, developer incentives, land donations, land conservancies, and voluntary contributions. These strategies could be used by communities as they become locally viable options.

Results from the 2006 City of Wichita Citizen Survey by the National Research Cenher, Inc.

6-D. The WAMPO region may also consider supplementing existing funding sources with Public-Private Partnerships. Public–Private Partnerships can also provide seed money to develop pathway systems in local communities. In this scenario, community based foundations or other not-for-profits work with local governments to either build community paths or encourage residents to become more physically active.

Within the State of Kansas, the Sunflower Foundation: Health Care for Kansans (**http://www.sunflowerfoundation.org**) has provided funding for smaller, more health related path projects.

Another source of funding that could be explored is through the John S. and James L. Knight Foundation (**http://www.knightfdn.org**) which has been instrumental in reshaping many communities. Wichita is eligible for funding from this foundation as one of the 26 original Knight Communities.

Small Details for Implementation Within the WAMPO Region

This document is primarily a facilities development plan for where major infrastructure improvements should be made throughout the region, however it also recognizes that

there are smaller, low-cost strategies that can and should be undertaken to improve conditions for bicycling and walking. The WAMPO Regional Pathway System Plan follows an established "4-E" approach for non-motorized planning. Such implementation approach includes education (of everyone involved), encouragement (to increase levels of use), enforcement (to protect the rights of all), and engineering (to provide the needed facility improvements).

A variety of 4-E approaches were presented to the public at the second Pathway Users Group Workshop in October 2006. Participants ranked options, and the top 4-E principles have been formulated into recommended strategies to be implemented through a variety of actions that shall be the joint responsibility of both the public and private sectors, as follows:

STRATEGY #1: Educate Both Bicyclists and Motorists on Rules of the Road

1-A. Expand current "Cycle Smart" programs of Safe Kids Wichita Area, working in conjunction with local law enforcement agencies, to bring bicycle rodeo and safety programs to a greater percentage of area youth. Explore opportunities for additional funding of these programs through the Kansas Department of Transportation Safe Routes to Schools program.

Cycle Smart
The Kansas Safe Kids "Cycle Smart" program is designed to increase the number of children who are protected by helmets when engaging in wheel sports by making reduced-price helmets and an educational program available to Kansas children. "Ready to Roll" bike rodeo kits are available for local community events through local Safe Kids coalitions (See: **www.kansassafekids.org**).

Safe Routes to School (SRTS)
SRTS is a federal reimbursement program that provides funding for infrastructure projects and educational activities that assist cities, counties, and school districts to enable children to walk or bicycle to school more safely. Funding is provided through KDOT to local public authorities and school districts working cooperatively to address safety and encouragement at the local level.
(See: **www.ksdot.org/burTrafficEng/sztoolbox/defailt.asp**)

1-B. Promote "BikeEd," a program of the League of American Bicyclists that emphasizes how to operate a bicycle safely and legally. Encourage local cycling advocacy groups to have members become League Cycling Instructors and offer courses to organizations throughout the WAMPO region.

BikeEd
The BikeEd program is a curriculum for adults and children and the certified instructors who teach it. BikeEd classes are taught across the United States by certified League Cycling

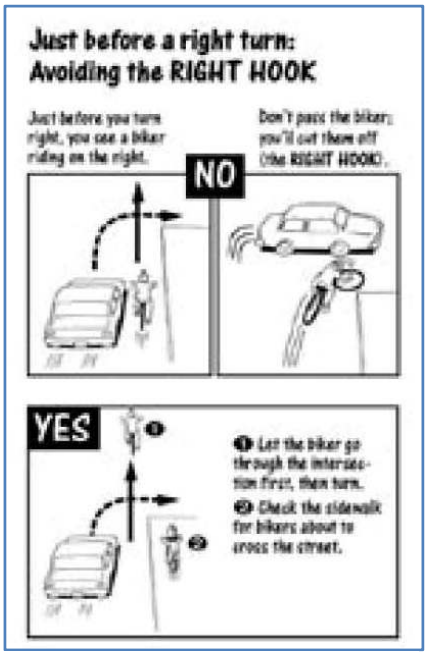
Instructors (LCI). Courses offered include:

- Road I - gives cyclists the confidence they need to ride safely and legally in traffic or on the trail.
- Road II - for more advanced students with an understanding of vehicular cycling principles.
- Commuting - for adult cyclists who wish to explore the possibility of commuting to work or school by bike.
- Motorist Ed - a classroom session directed towards motorists.
- Kids I – teaches parents how to teach a child to ride a bike.
- Kids II – a Road I class for 5th and 6th graders; and new group riding curriculum for ride leaders and participants.

Additional information may be found on the League of American Bicyclists website at:

www.bikeleague.org/programs/education

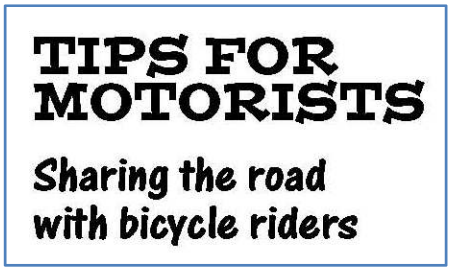
1-C. Target additional bicycle safety education toward motorists. Explore opportunities for the Wichita Metropolitan Planning Organization to coordinate development and dissemination of motorist awareness programs and literature throughout the region.



Example of Driver Education Materials produced by Dave Glowacz, WordSpace Press

Urban Bikers' Tricks & Tips

The author of the book, "Urban Bikers' Tricks & Tips: Low-Tech & No-Tech Ways to Find, Ride, & Keep a Bicycle," is available to develop brochures and safety literature for specific localities. Illustrated in step-by-step fashion, Dave Glowacz has developed "Tips for Motorists: Sharing the Road with Bicycle Riders," which can be customized to reflect Kansas traffic laws and meet the specific needs of the WAMPO region.



Motorist Ed

Motorist Ed is a 3-hour BikeEd classroom session that can be easily added to a driver's education curriculum, such as diversion training for reckless drivers or a course designed for local bus drivers. Directed towards motorists in general, topics covered include roadway positioning of cyclists, traffic and hand signals, principles of right-of-way, and left and right turn problems. Contact: **www.bikeleague.org**

1-D. Improve bicyclist and pedestrian safety in the region by increasing the expenditure level for non-motorized projects. Address the issue of balancing needs with financial ability, as identified in the WAMPO Metropolitan Transportation Plan (MTP) 2035.

1-E. Monitor pedestrian and bicycle crashes by local Police and Sheriff Departments. Develop more detailed reporting formats that can provide guidance for future types of education that will directly correlate to crash types occurring in the region. Likewise, use enhanced reporting formats to determine where, if any, high accident locations exist that require corrective measures to existing infrastructure in addition to educational outreach.

STRATEGY #2: Regularly Maintain Pathway Facilities

2-A. Create a spot improvement program. Establish a regional reporting system whereby individual cyclists or other pathway users can report small improvements needed on either pathways or roadways. Create a standard reporting form and/or on-line resource and assign responsibility to a single entity for collecting all reported problems for the region and disseminating spot improvement requests to each affected jurisdiction.

2-B. Provide regular maintenance on roadways with designated bicycle facilities. Focus sweeping activities and maintenance attention to the right-hand edge of roadways and promptly fix problem areas. Pavement cracks (such as the gap between two slabs of pavement) and projections (including sinking drainage grates or crude patch jobs) pose particular hazards to bicycle travel.

2-C. Provide regular maintenance on off-road pathways so that the facility becomes an asset rather than liability. Focus maintenance on removal of sand, gravel, broken glass, branches and encroaching vegetation. Fix potholes, corrugations, and other rough surfaces. As an interim measure, post warning signs along pathways notifying trail users of an upcoming hazard if the problem cannot be fixed promptly.

2-D. Design facilities to national AASHTO standards that have been established for user safety and to minimize future maintenance needs.

STRATEGY #3: Conduct Special Events to Encourage Increased Levels of Bicycling and Walking

3-A. Participate in national events designed to focus attention on and increase usage of non-motorized transportation modes.

iWALK: International Walk to School Day
Join kids and families around the globe to walk and bike to school annually in the month of October. Organizational assistance, event ideas and resources are available. See: **www.walktoschool-usa.org**

National Bike Month
Each year, May is National Bike Month, when the League of American Bicyclists promotes Bike-to-Work Week and Bike-to-Work Day. Event organization, promotional materials, radio and video public service announcements, and bike month grants are available to local communities. See: www.**bikeleague.org/programs/bikemonth/**

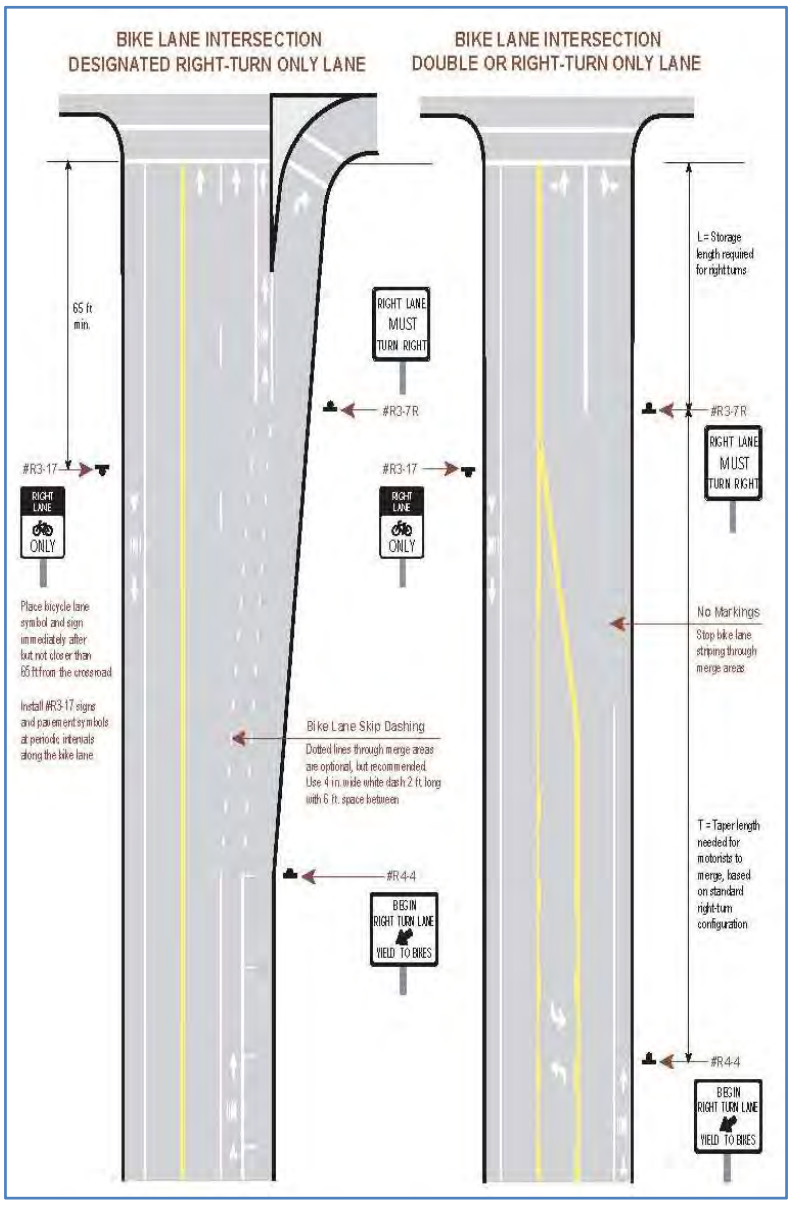
3-B. Support regional efforts to encourage Transportation Demand Management (TDM) strategies. Include bicycling, walking, and transit encouragement programs as effective means of reducing traffic and travel demand on the transportation network.

STRATEGY #4: Design Intersections to Accommodate Bicycle Travel

4-A. Use signal detection practices such as bicycle sensitive pavement loops or video surveillance that allow bicycles to trip signals. Adjust signal timing to provide an adequate clearance interval for bicyclists who begin crossing at the end of a green light.

4-B. In corridors where bicycle lanes are present and space allows, provide space for the bicycle lane at the stop bar. Always locate through bicycle lanes to the left of right-hand turning lanes as required by AASHTO.

4-C. In corridors where bicycle lanes are present and pavement space at the intersection needs to be allocated to vehicular turning movements, drop the bicycle lane in advance of the intersection and resume lane striping on the far side. Follow AASHTO and MUTCD for guidance.



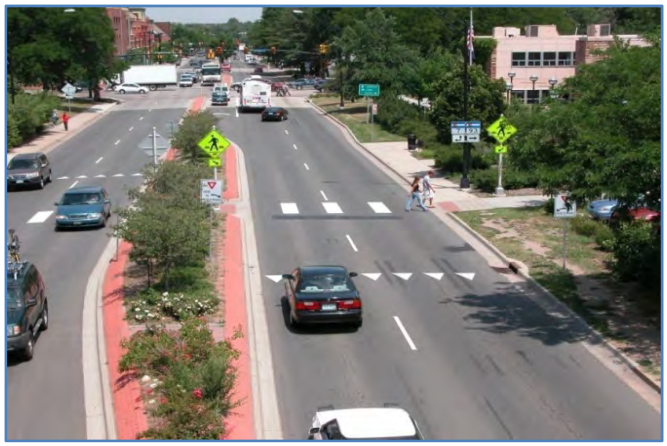
STRATEGY #5: Print and Distribute a Bicycle Users Map

5-A. Update the last bicycle user map printed in the 1980s. Revise the format used previously that identified circuitous local routes lacking connections to destinations. Instead, the new map should show existing pathway facilities and suitability ratings of collector and arterial roadways for bicycling.

5-B. Encourage local advocacy groups to undertake this project, working in cooperation with the WAMPO Geographic Information Systems (GIS) staff to obtain needed data, as a major fundraising effort for local safety education and encouragement programs. Formulate a business plan for advertising and map sales to generate revenues.

STRATEGY #6: Design Safe, Convenient, and Visible Pathway Crossings of Major Roadways

6-A. Follow national standards set forth in the Manual of Uniform Traffic Control Devices (MUTCD) for signing and pavement markings at trail/roadway intersections. This action item needs to be done by every jurisdiction on every trail crossing, especially existing crossings of the Chisholm Trail and current and proposed crossings of the Redbud Trail.



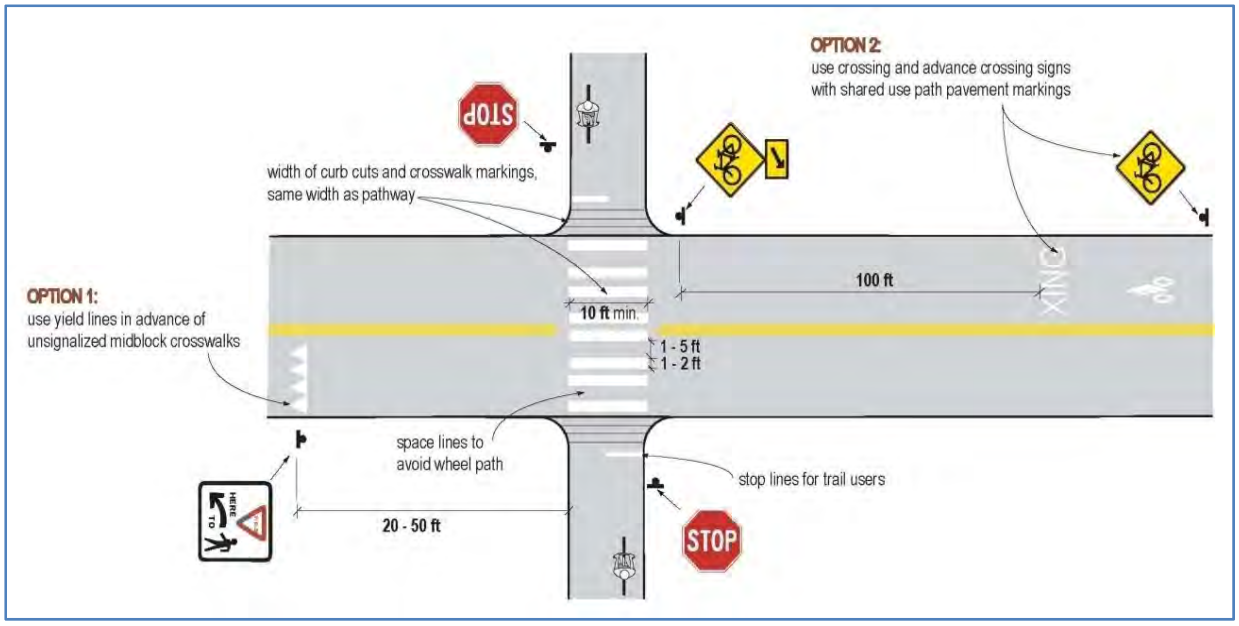
Example of pedestrian refuge islands with pedestrian actuated signals that stop traffic only when a user is present, visible crosswalks, and appropriate signing.

- Use highly visible "ladder-style" crosswalks with longitudinal lines for added visibility. Plan for minimal maintenance by slightly adjusting the spacing of pavement markings to avoid the path of vehicular tire wear.
- Use MUTCD warning and regulatory signing on all intersection approaches (trail and roadway). Two options exist per MUTCD Figure 9B-7 or 3B-15. See illustration below.

6-B. Provide mid-block trail crossings in locations with good visibility and adequate stopping sight distance, typically on roadways where speed limits are less than 45 mph.

- Use highly visible "ladder-style" crosswalks and appropriate signing.
- Consider installing pedestrian actuated signals to stop vehicular traffic for trail user crossings. Light remains green for vehicular traffic at all other times. Another option may be to install a pedestrian hybrid beacon. A pedestrian hybrid beacon is a special type of hybrid beacon used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk.

- Where a center turning lane is present on the intersecting roadway, provide a mid-block refuge island to assist non-motorized users in crossing one direction of travel at a time.



6-C. Install orientation signing along trails at roadway crossings so that trail users know intersecting street names.

STRATEGY #7: Integrate Bicycling with Transit

7-A. Provide bicycle parking racks at bus stops along the identified primary corridors that follow street rights-of-way. The preferred rack style shall be one inverted-U parking rack with 30" min. clear spacing provided to allow bicycle loading and locking maneuvers. Bike parking racks have been installed throughout the City of Wichita. The project should be complete by the end of 2011.

7-B. Wichita Transit currently provides bike racks on all fixed route buses. Efforts to provide bicycle racks on other transit vehicles; those used for on-demand or paratransit service providers will need to be investigated for potential benefit of those using these services.

7-C. Encourage Transit-Oriented Development (TOD) along or near transportation corridors and activity centers that are served or anticipated to be served with public transit. Design and develop the lands in proximity to transit facilities to encourage people to use mass transit. Use TOD as a tool to spur neighborhood revitalization in disinvested areas, promote more efficient use of the region's transportation network, and protect a region's natural environment by building at more compact development patterns.

7-D. Establish specific TOD overlay districts. Site design criteria to be addressed in the regulations shall include:

- Pedestrian access and circulation from the boarding stop should be the most important consideration in site design.
- Provide grid-like street patterns with a high degree of connectivity that serve all modes of transportation - transit, bicycling, walking, and auto.
- Locate buildings next to stations, with commuter parking lots further removed. Require that buildings front the street and have direct access to sidewalks.
- Provide businesses that service commuters - such as drug stores, dry cleaners, banks, and grocery stores.
- Provide attractive landscaping, continuous paved sidewalks, street furniture, urban art, screen-off parking, weather protection, safe street crossings, public open spaces, and pedestrian plazas.

STRATEGY #8: Provide Bicycle Parking Facilities

8-A. All public and private destinations throughout the region shall provide bicycle parking racks per guidelines developed by the Association of Pedestrian and Bicycle Professionals (ABPB).

Information on integrating and using bicycle parking facilities may be found on the BicyclingInfo.org website at:

http://www.bicyclinginfo.org/engineering/parking.cfm

Recommended bicycle parking guidelines from the Association of Pedestrian and Bicycle Professionals, 2002

Key components identified by ABPB for bicycle parking facilities include:

- Parking racks shall be styles that adequately support the bicycle.
- Individual racks shall be sited to permit convenient user access.
- Rack parking areas shall be located adjacent to building entrances.

8-B. Consider providing bicycle lockers or indoor storage in locations where bicycles will be parked overnight or for longer durations.

Planning Background

Planning for pedestrian needs is very different than planning for bicycle needs, yet the WAMPO Regional Pathways Plan was intended as a planning effort for both modes.

This plan addresses multi-use pathways in detail, as this facility type benefits both cyclists and a variety of pedestrians - walkers, runners, joggers, in-line skaters, people in wheelchairs, people taking the dog for a walk, people taking the baby for a stroll, etc.

However, only a select type of walking occurs on recreational paths, with the majority of daily activity occurring on sidewalks throughout communities in the region. Thus the following supplemental pedestrian planning guidance is provided for the local jurisdictions. It is important to note that pedestrian planning, in general, takes the form of policy guidance. No pedestrian plan map therefore accompanies the suggested implementation strategies.

Types of Walking

The WAMPO Regional Pathways Plan recognizes that people walk for a variety of reasons, including:

Destination-based Walking

People walk for specific purposes to get to destinations such as work, school, or shopping. Almost all auto and transit trips involve destination-based walking to reach the final trip destination.

Rambling

People ramble as a recreational activity. They walk the dog or push a baby carriage. They jog or speed walk for exercise. They go for a walk just for the sake of going for a walk.

Strolling/Lingering

In certain settings, people stroll and linger. They stand on the sidewalk and talk with others they meet. They sit on a bench and eat ice cream while watching people.

Promenade

People walk to be seen and interact with other members of the community. A good example of this type of walking is high school students who promenade in groups in commercial areas.

Special Events

These include farmer's markets, public concerts, parades, arts festivals, and other community events.

Types of Pedestrian Environments

There are different types of pedestrian environments just as there are different reasons people walk. Therefore, walking environments should be thought of as arrayed along a continuum of pedestrian friendliness with four classifications:

Types of Pedestrian Environments

There are different types of pedestrian environments just as there are different reasons people walk. Therefore, walking environments should be thought of as arrayed along a continuum of pedestrian friendliness with four classifications:

Pedestrian Intolerant Environments

These are areas where walking is unsafe and unattractive. Examples include freeway corridors, certain industrial or extraction land uses, landfills, and major streets and roadways lacking continuous sidewalks.

A major characteristic of Pedestrian Intolerant environments is that they lack pedestrians, either due to a lack of pedestrian accommodations and/or dominance by auto traffic and auto-oriented land uses.

Pedestrian Tolerant Environments

These environments provide pedestrian facilities, but at a minimal level of accommodation. These are areas and corridors where walking is technically safe (there are continuous sidewalks and reasonably safe street crossings), but land use patterns generate little walking activity.

Pedestrian Intolerant Environment

Arterial street corridors, remote or rural streets, and certain light industrial or warehousing areas will only attract limited amounts of utilitarian walking, and will not appeal to recreational walkers or strollers.

Pedestrian Supportive Environments

These are well-designed residential and commercial neighborhoods, employment centers, parks and recreational areas. Sidewalks are continuous and buffered from streets, and wide enough for passing and walking side by side. Land uses are dense enough to either attract utilitarian walking trips of reasonably short lengths (half mile or less), or attract recreational walkers and joggers. Buildings, not parking lots, face streets and good street crossings are provided.

A good test to determine a Pedestrian Supportive environment is whether or not a parent is comfortable letting his or her 8-year old child walk ahead of them with minimal supervision.

Pedestrian Tolerant Environment

Pedestrian Supportive Environment

Pedestrian Places

These limited extent districts have mixed-use land developments, moderate to high densities, good transit service, and extensive pedestrian amenities. Here people will stroll and linger past store fronts and urban landscape features, walking for both utilitarian and recreational purposes.

Pedestrian Places have people of all ages moving about between multiple activities. At least three unique, highly identifiable areas such as outdoor seating, a water feature, public art, or pedestrian-oriented shopping will be located in close proximity to each other.

Pedestrian Places

Street System Components That Impact Walking

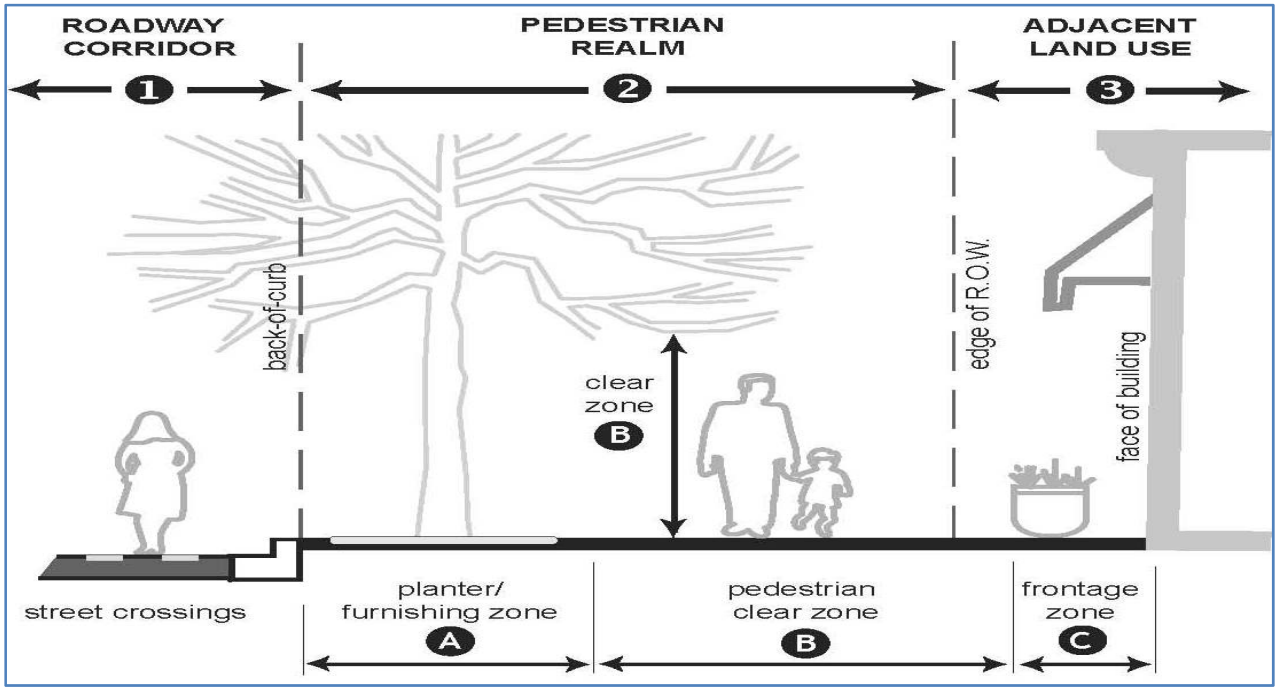
Three distinct components of the street system are crucial elements in the design of pedestrian environments in all place types.

The Roadway Corridor

Creating good pedestrian environments requires careful attention to the design of streets, the allocation of space within street rights-of-way, the spacing, length and treatment of street crossings, and allocation of time at signalized intersections. In general, higher adjacent traffic volumes moving at faster speeds on wider roadways create less pedestrian-friendly conditions.

The Pedestrian Realm

Also called the roadside zone, this area includes the sidewalk as well as the buffer zones on either side that separate the walkway from motor vehicle traffic and link the walkway to adjacent properties. In general, greater separation from the street is provided where higher vehicular travel speeds are present, and additional walkway width is provided where more pedestrians use the system.



Adjacent Land Use

Sidewalks alone do not make a place into a pedestrian destination. To generate pedestrian presence, land uses must be highly mixed and reasonably dense. Some combination of residential, lodging, retail, restaurant, civic, and employment uses must be present within a contiguous area. Buildings with numerous doors and windows frame the street, the street grid is fine-grained, and parking is located on-street or internal to the block.

Supplemental Pedestrian Guidelines for the WAMPO Region

There are numerous ways that communities within the region can create a more pedestrian-friendly environment. Large-scale policy changes should be made to better address pedestrian needs, as well as small-scale spot improvements completed in numerous locations. Key implementation strategies include the following:

STRATEGY #1: Create no new Pedestrian Intolerant Environments

1-A. All streets shall have sidewalks to accommodate basic practical walking needs. Local jurisdictions shall require new developments to provide sidewalks and the Cities shall work to complete missing sidewalk links in previously developed areas.

Urban collectors and arterial streets are the primary location for businesses and other attractions, and shall thus have sidewalks located on both sides of the street. Sidewalks shall be at least 5 feet wide. Since most major streets in the WAMPO region do not have on-street parking, a buffer strip at least 6 feet wide shall be required between the street and sidewalk.

Local streets can receive moderate levels of pedestrian activity and should be encouraged to provide sidewalks on both sides of the street. Sidewalks shall be at least 4 feet wide with a buffer strip separating the street from the walkway. Curb-attached sidewalks should be discouraged, but shall be at least 6 feet wide if permitted.

Rural roadways typically experience low levels of pedestrian activity and need no accommodation. Exceptions include corridors leading to ex-urban school locations where sidewalks, paved roadway shoulders, or multi-paths shall be provided.

1-B. All intersections shall have delineated crosswalks to meet minimum Pedestrian Tolerant design guidelines.

1-C. Legal pedestrian crossings shall be provided at distances no greater than 1,320 feet (1/4 mile) apart.

1-D. All projects shall meet minimum requirements of the Americans with Disabilities Act (ADA).

STRATEGY #2: Strategically work to improve existing Pedestrian Tolerant Environments to Pedestrian Supportive standards.

2-A. Future intersection improvements shall not be made to accommodate vehicular throughput at the expense of pedestrian safety or convenience. All new intersection retrofit projects shall include crossing treatments that follow Pedestrian Supportive guidelines, as outlined in the chart on page 6-6.

2-B. Throughout the region, the following geographical areas shall be designed to be Pedestrian Supportive:

- All primary pathway corridors where bicycles will be accommodated on-street, as identified in the WAMPO Regional Pathway System Plan;
- Designated school walking routes;
- Bus routes;
- Throughout future mixed-use and transit oriented developments; and
- Within arterial street corridors near destinations such as parks, trail crossings/pathway system access points and commercial activity centers.

2-C. In Pedestrian Supportive environments, the roadway corridor shall serve multiple modes of transportation, including walking and transit. Maximum distance between pedestrian crossing opportunities shall be 528 feet (1/10 of a mile). Street crossing distances shall be

shortened through use of smaller curb radii, curb extensions, medians, refuge islands, and/or right-turn slip lanes.

Guidelines for Improving Pedestrian Tolerant Environments to Pedestrian Supportive Standards

Crossing Treatment Guidelines		
	Pedestrian Tolerant Design	**Pedestrian Supportive Design**
Marked Crossings	Crossings are typically marked, but legal crossing also exist at unmarked intersections.	Marked crosswalks should be required, particularly in the following locations: ➢ at all open legs of signalized intersections with adjoining sidewalks ➢ at all arterial intersections in Downtown and mixed-use centers, or when connecting to significant retail activity ➢ at multi-use trail crossings ➢ along school walking routes ➢ at or near important transit connections ➢ near housing for the elderly
Spacing	Crossings shall be spaced a max. of 1320' apart. (1/4 mile) Note: Not practical outside of CBDs.	Crossings shall be spaced a max. of 528' apart (1/10 mile) and a min. of 330' (traditional city block length)
Crosswalk Pattern	Standard crosswalks (two parallel, horizontal lines)	Highly-visible Ladder Bar or Piano Bar crosswalks (with perpendicular bars spaced so that wheels of motor vehicles pass on either side of the markings to minimize maintenance). Or use colored and textured surfaces to improve aesthetics in mixed-use areas, potentially in conjunction with raised speed table crossing treatments.
Signalization Timing	Use average walking speed of 3.5 - 4.0 feet/second Note: MUTCD requires 3.5 feet/second.	Use a slower walking speed of 2.5 - 3.0 feet/second to accommodate older pedestrians and people with disabilities
Curb Radius	25' curb radius standard 30' curb radius on major streets with truck/bus traffic	5'-15' max. curb radius Smaller curb radii (up to 5' min.) may be used if on-street parking or bike lanes
Curb Ramps	Diagonal curb ramps may be permitted in the following locations if curb radii are >20' and a landing at the bottom of the ramp is positioned within the crosswalk area for both directions of travel: ➢ Where utilities prevent the installation of paired curb ramps ➢ At intersections that are not signalized ➢ In some residential areas where traffic volumes are very low	Paired curb ramps recommended Diagonal ramps to be avoided whenever curb radii are <20' since moving traffic can encroach upon the landing area
Medians and Refuge Islands	Recommended for use: ➢ In intersections when the length of the pedestrian crossing exceeds 60 feet ➢ At intersections with complex vehicle movements or long signal phases ➢ In conjunction with uncontrolled midblock crossings	➢ Provide a median island when the length of the pedestrian crossing exceeds 48 feet ➢ Consider narrowing traffic lanes (potentially down to 10 feet) to have the added effect of slowing motor vehicle speeds at the crossing location, and shortening pedestrian crossing distances
Slip Lanes	Provide a triangular "pork chop" refuge island within the intersection when: ➢ Curb radii >30' are unavoidable ➢ Slip lanes can be designed based upon a compound curve design to discourage high-speed turns, while accommodating large trucks and buses	No slip lanes allowed or needed
Curb Extensions	Typically not provided	Consider installing on streets with: ➢ On-street parking, especially diagonal parking ➢ Limited left-turning traffic by buses and large vehicles ➢ One-way traffic ➢ On minor streets in residential areas
Mid-Block Crossings	Use in high-activity areas only Locations being considered need to be studied carefully	Consider installing unless crossing is: ➢ < 300 feet from another crossing point ➢ On streets with speeds > 45 mph

2-D. In Pedestrian Supportive environments, the pedestrian realm shall include 6' to 8' wide sidewalks, with walkways separated from the street by buffers, street tree planters, or furnishing zones at least 5' in width.

2-E. Additional measures such as pedestrian-friendly site development, school site planning and design, neighborhood traffic calming, and traffic management programs shall be considered within identified Pedestrian Supportive areas. Land use guidelines shall include mixed uses, reduced building setbacks, smaller parking areas, and improved pedestrian access.

2-F. Safe Routes to Schools shall be created that meet Pedestrian Supportive standards and shall include the following:

- **Roadway Corridors** with speed limits 25mph or less shall be in force when students are arriving at and leaving school. Design features shall be used to manage speeds and provide positive control at crossing locations;
- **School walking routes** should be planned to take advantage of existing traffic controls;
- **Crosswalks** should be marked at signalized and stop-controlled intersections. At non-intersection locations, crosswalk markings legally establish the crosswalk. Transverse crosswalk lines may be used where a Pedestrian Tolerant condition is acceptable. Otherwise, crosswalks should be marked with ladder or piano bar style markings;
- **Traffic controls** for school areas shall be in conformance with Part 7 of the 2009 edition of the Manual on Uniform Traffic Control Devices (MUTCD);
- **Traffic calming devices** such as raised crossings, refuge islands, bulb-outs, neighborhood traffic circles, landscaping, etc. shall be installed in the vicinity to slow vehicles;
- **Multi-use pathways** that provide for bicycling and walking to school should receive priority for funding, whether part of the regional system or a local community pathways plan; and
- **Land Use** design elements at school sites shall give paramount emphasis to the safety of pedestrians near motor vehicle traffic. School bus loading and unloading shall take place on school property, off the surrounding street system. Bus drop-off zones shall be separated from auto drop-off zones to minimize confusion and conflicts. Parking shall be minimized. Buildings shall be accessible to pedestrians from all sides.

STRATEGY #3: Make walking the priority travel mode in select Pedestrian Places within the region.

3-A. Throughout the region, the following select geographical areas shall be designed as Pedestrian Places:

- Delano, Old Town, and the Water Walk/Arena neighborhoods within the City of Wichita;
- Downtown main streets of smaller communities; and

- The central core of future mixed-use developments.

3-B. Incentives shall be provided to guide development patterns to create distinct Pedestrian Places that attract significant numbers of people and provide opportunities for socialization, strolling, and lingering.

3-C. Within Downtown Wichita, the future mobility study shall consider pedestrian needs in the retrofit of one-way streets to two-way traffic movements. The study shall not only look at vehicular traffic flows, but also pedestrian crossing treatments, opportunities for on-street parking, sidewalk improvements, enhanced pedestrian connections to public parking and public transit service, and the pedestrian-friendliness of existing land use and proposed developments.

3-D. Pedestrian Places shall not be bisected with high-speed, multiple-lane arterial streets. Street right-of-way allocations shall be balanced and roadway design shall give priority to pedestrians. Additionally:

- **Roadway Corridors** through Pedestrian Places shall be designed to carry moderate traffic volumes (<15,000 ADT) at slower travel speeds (25-30 mph). On-street parking and/or bicycle lanes shall be provided;
- **Crosswalks** should be of a high-visibility design, with texture, pattern, color and/or traffic calming measures such as raised speed tables or curb extensions. Crossing distances should be kept short by limiting pavement width (4 lanes max.) and using small curb radii (25' max.). Paired curb ramps shall be provided perpendicular to the curb face, aligning directly with the crosswalk;
- **Block sizes** shall be small, with frequent pedestrian crossings (every 330' feet or less) using pedestrian activated traffic signals; and
- **Parallel on-street parking** shall be encouraged as a means of traffic calming and a generator of additional pedestrian traffic. Where diagonal parking is provided, consideration should be given to back-in angle parking to improve safety by having doors and trunks open to sidewalks and drivers pull out head-first into traffic.

3-E. In Pedestrian Places, the pedestrian realm shall be built and maintained to the highest standards:

- **A paved planter/furnishing zone** shall separate walkways from the street and accommodate utilities, parking meters, passenger unloading, streetscape amenities and street trees planted within tree wells.
- **Sidewalks** should be at least 8'wide to accommodate passing and pairs of pedestrians walking side-by-side. In Pedestrian Places, the overall sidewalk width may be 10'-30' wide to provide space for amenities plus an 8'-10' pedestrian clear zone.
- **The frontage zone** in downtowns and mixed-use areas should not include landscape buffers separating pedestrians from stores, but instead sidewalks should extend to building faces. At least 2' of paved "shy distance" shall be provided away from the

building walls to accommodate window shopping, sidewalk displays, outdoor dining, etc.

- **Amenities** should include pedestrian furniture groupings, sculpture, drinking fountains, decorative fountains, and wayfinding signs. Lighting shall include overall street lighting, low-angle pedestrian street lamps, and additional light emitted from stores that line the street.

3-F. In Pedestrian Places, adjacent land uses must be designed around the pedestrian. First-floor retail, a vibrant mix of uses, and at least three distinct, complimentary activities that appeal to a variety of age groups and located within walking distance of each other are critical to create mixed-use settings that serve as Pedestrian Place destinations.

- **Buildings** shall face the street, be placed at minimum setbacks or build-to lines, range from 3-5 stories high, and create a height to width ratio of 1:4 minimum and 1:1 maximum.
- **Architectural Design** shall include porous street frontages with frequent doors and windows, and use of awnings and arcades for shade and shelter. Blank stretches of wall shall not exceed 15 feet.
- **Parking** in surface lots located in front of buildings will destroy Pedestrian Supportive and Pedestrian Place Environments. On-street parking shall be provided on all block faces, combined with parking structures or internal block parking distributed throughout the district, to maintain the quality streetscapes necessary to attract high levels of pedestrian usage.

Sidewalks On Both Sides of Streets

"Many comments were received from the public and transportation stakeholders regarding the need to provide sidewalks on both sides of all streets. Providing sidewalks that complement the public transportation system were believed to be a high priority."

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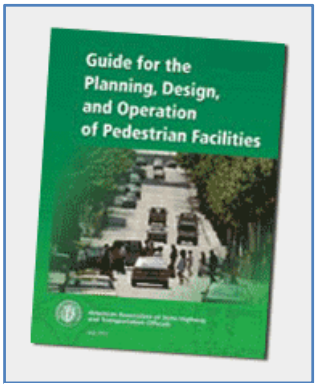
STRATEGY #4: Pay attention to details that impact pedestrians in all public and private projects.

4-A. Individual communities shall include a pedestrian accommodation checklist when reviewing development plans and proposed public infrastructure projects.

4-B. WAMPO shall require enhanced pedestrian safety, accessibility and usability in all projects that seek federal and state funding.

4-C. The July 2004 AASHTO "Guide for the Planning, Design, and Operation of Pedestrian Facilities" shall be used as the region's pedestrian guidelines. AASHTO is currently updating this guide and, once approved, will be used as the standard.



AASHTO Guide for the Planning, Design,and Operation of

Details of pedestrian accommodation that shall be addressed in all public and private sector projects include:

- **Designing roadways to accommodate pedestrians** – addressing speed management, roadway widths, curbs, sight distances and sight lines, and street lighting
- **Sidewalk design** – including sidewalk and buffer widths, transit connections, driveway access management, grade and cross slope, stairs, sidewalks for highway bridges, underpasses and tunnels, surface treatments, pedestrian facility lighting, obstacles and protruding objects, ambience, shade and other enhancements, and design of off-road and shared-use paths
- **Intersection design** – including curb radii, crossing distance considerations, turning movements, crosswalks, sidewalk and curb treatments, and street and intersection lighting
- **Midblock crossings** – crossing distance considerations, traffic calming at mid-block locations and, mid-block signals
- **Grade-separated crossings** – sidewalk continuity, overpasses vs. underpasses, and lighting
- **Pedestrian signals** – including pedestrian signal phasing, signal timing, warrants, and innovative signal options
- **Pedestrian-related signing** – regulatory signs, warning signs, guide signs, and street name signs
- **Sidewalk maintenance** – including surface repairs, snow removal, vegetation, and drainage improvements
- **Construction work zones** - accommodation of pedestrian traffic during construction phases

Source: Guide for the Planning, Design, and Operation of Pedestrian Facilities, American Association of State Highway and Transportation Officials, July 2004

Emerging Opportunities and Issues

Several important opportunities and issues were brought up during the 2011 update of the Regional Pathway Plan (RPSP) through stakeholder meetings, Project Advisory Group (PAG) meetings, and public open houses. These opportunities and issues, along with others to be identified between this update and a major update in 2013, should be further explored. The emerging opportunities and issues identified in this update have been separated into three categories:

- Improve Monitoring of the Plan;
- Suggested Route Changes; and
- Suggested Route Additions.

Improve Monitoring of the Plan

The Regional Pathways System Plan is a fluid document and will over time be updated to reflect the current system. The expense of the infrastructure to complete the recommendations of the Regional Plan needs to be justifiable. WAMPO, with the use of system performance measures, will track various metrics to provide information on the effects of investments on the region's pathways system. Additional data may be collected to support the evaluation of the regional pathways system. Two such initiatives to provide additional data are bicycle and pedestrian count programs and the use of a bicycle suitability index.

Bicycle and Pedestrian Count Program: The PAG recommended the creation of a regional bicycle and pedestrian count program. The data collected from this program would help improve the performance measures identified in Chapter 3, as well as provide information on the relative use of a trail or trail segment. Data collected from a count program would give a better overall indicator of the use of bicycle and pedestrian facilities in the region. In addition, when bicycle and pedestrian counts are available, they can be used to calculate bicycle and pedestrian crash rates (total pedestrian and bicycle crashes per the number of people that walk and bike). Crash rates, in return, will provide much needed information on the safety of the pathway system in the region.

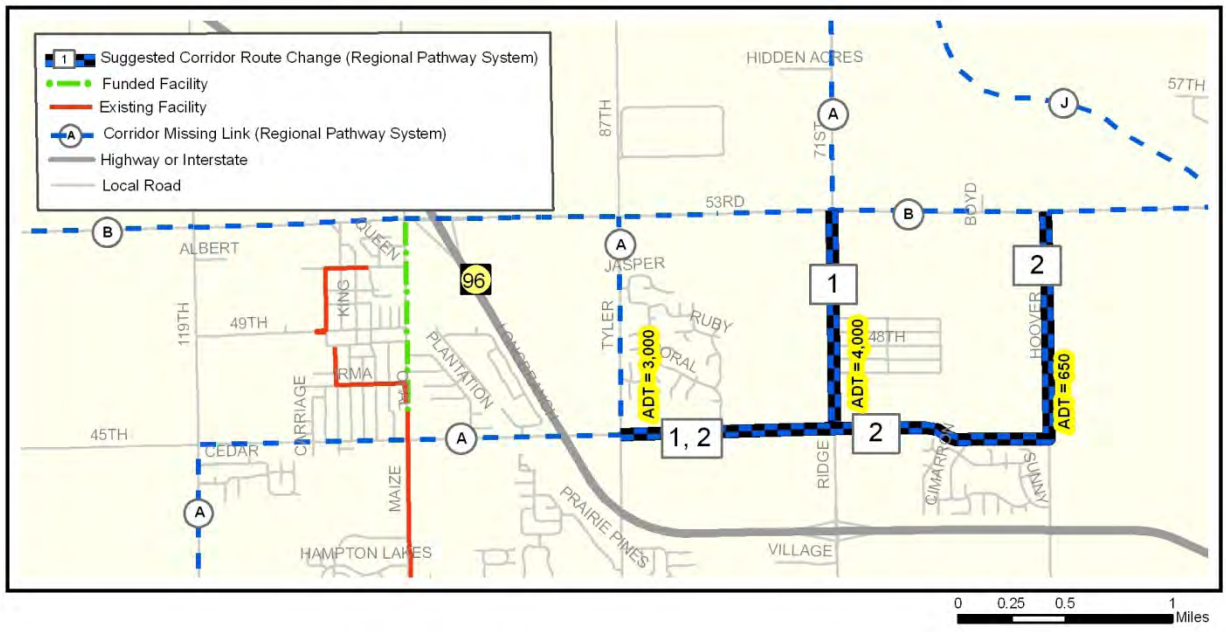
Bicycle Suitability Index: Many metropolitan areas use a Bicycle Suitability Index (BSI) to evaluate roadways. A suitability model or index is used in bicycle transportation planning to assess the suitability of existing roadway characteristics for bicycling. It is also used to identify existing gaps and potential bikeways, and recommend improvement projects that would enhance or complete the bicycle network. BSIs are generated using multiple criteria such as number of lanes, lane width, average daily traffic, land use, truck counts, posted speed, etc. BSIs can work equally well in both urban and rural settings. Specific criteria to be used to build the BSI will be discussed, evaluated, and approved by the PAG for use in the next Regional Plan update.

Suggested Route Changes

WAMPO collected information from the public through open houses and meetings on how to make the regional pathways system better. The Regional Pathway System Plan Advisory Group also looked at the current and proposed pathway options and offered several suggestions for consideration for the 2013 update of the Regional Plan. The PAG identified eight potential changes to routes identified in the 2007 Plan. Additionally, the PAG identified six potential new routes or extensions to existing routes for consideration. The suggestions and options identified through these efforts are not inclusive. Additional new routes, extension of existing routes, or changes to routes already identified may be developed and incorporated into the next update of the Regional Plan. The options presented for consideration in this update may be explored, revised, or removed from further discussion. Options presented for consideration at this time include:

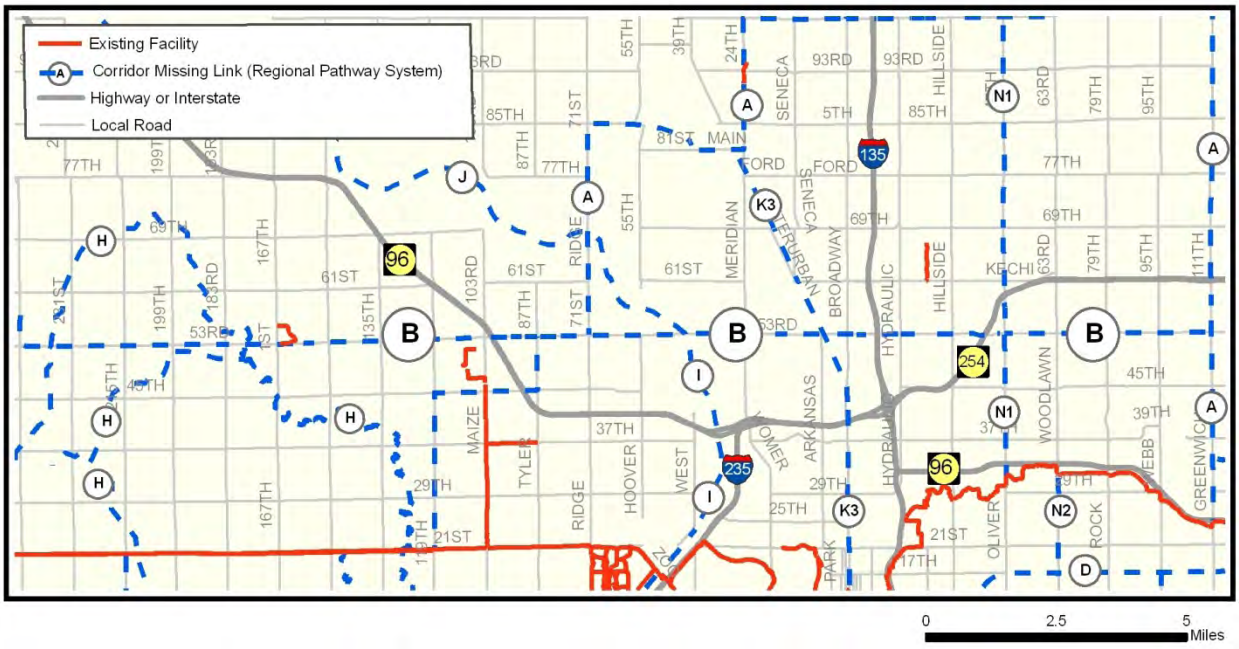
Corridor A: OZ Rural Loop: Corridor A is a rural loop which the Oz Bicycle Club helped identify in 2006. The intent of showing this loop is to help prioritize investments on rural roads. Investments for this route, as discussed in the Chapter 3, include paved wide shoulders and *Share-the-Road* signs. Two minor route changes in the northeast section of this corridor were suggested by the Project Advisory Group. The suggested route changes (map below) include:

1. Continue on 45th to Ridge (instead of Tyler/87th).
2. Continue on 45th to Hoover (instead of Tyler/87th).



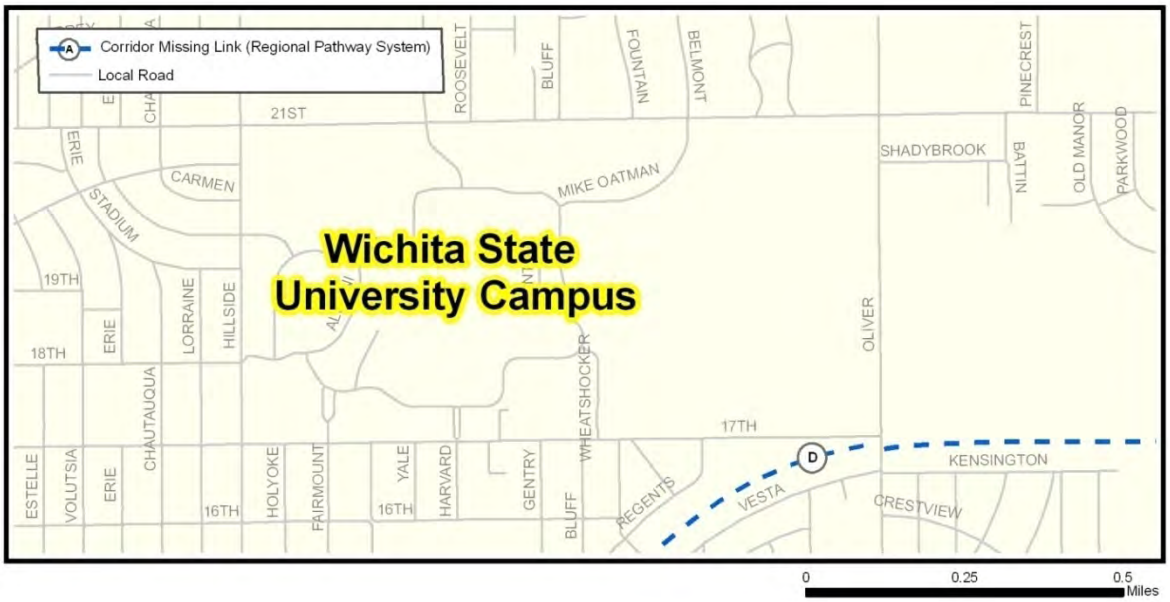
During the 2013 update, decisions will need to be made on which is the most feasible route and whether it should be preserved as a bicycle corridor or improved into a bicycle corridor.

Corridor B: 53rd St. N.: 53rd Street was identified as a continuous east/west corridor that connects Andale to Kechi. The corridor itself is over 23 miles long, making it extremely difficult to address as one entire project. A suggestion from the Project Advisory Group was to break this into smaller, more manageable segments as identified in the map below.



During the 2013 update to this Plan, additional discussion and coordination among the affected jurisdictions on how to best break this corridor into smaller, more manageable segments will be needed.

Corridor D: Redbud Trail or BNSF/17th St. The City of Wichita is currently working on a section of this corridor from the Canal Route multi-use trail to Oliver. This corridor runs past the Wichita State University (WSU) campus. The Project Advisory Group suggested that an interchange or connection to the WSU campus should be explored. The map below identifies the Redbud Trail as it passes southeast of the WSU campus.



During the 2013 update to the plan, Wichita State University should be consulted on the feasibility and logistics of connecting a regional trail to the campus.

Corridor E(1): Prairie Sunset Trail: The existing portion of the Prairie Sunset Trail is a rail-banked facility. The completion of this corridor would connect Wichita to Goddard and Garden Plain. Two additional alignment options to connect to Maple Street were identified:

1. Connection to Maple Street from the Prairie Sunset Trail along 119th.
2. Repurpose the abandoned railway for bicycle and pedestrian travel from the Cowskin Creek to Hoover Street.

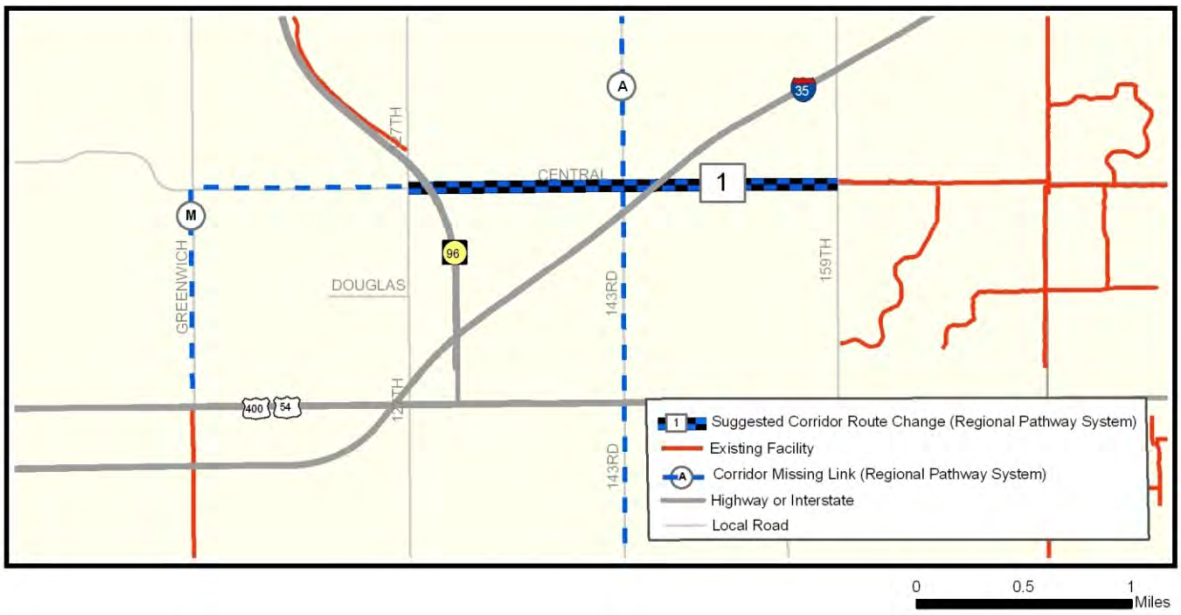
These options are identified on the map below.

During the 2013 update to this Plan, discussion will need to occur to decide if all of the alignment options should be included in the plan, if one option is more feasible than another, or if one option has a higher priority than the rest.

Corridor K(1): Haysville Connection: Corridor K is another important connection that links two municipalities; Wichita to Haysville. An additional alignment option was identified using the abandoned railway corridor. The following map identifies this corridor and the proposed connection.

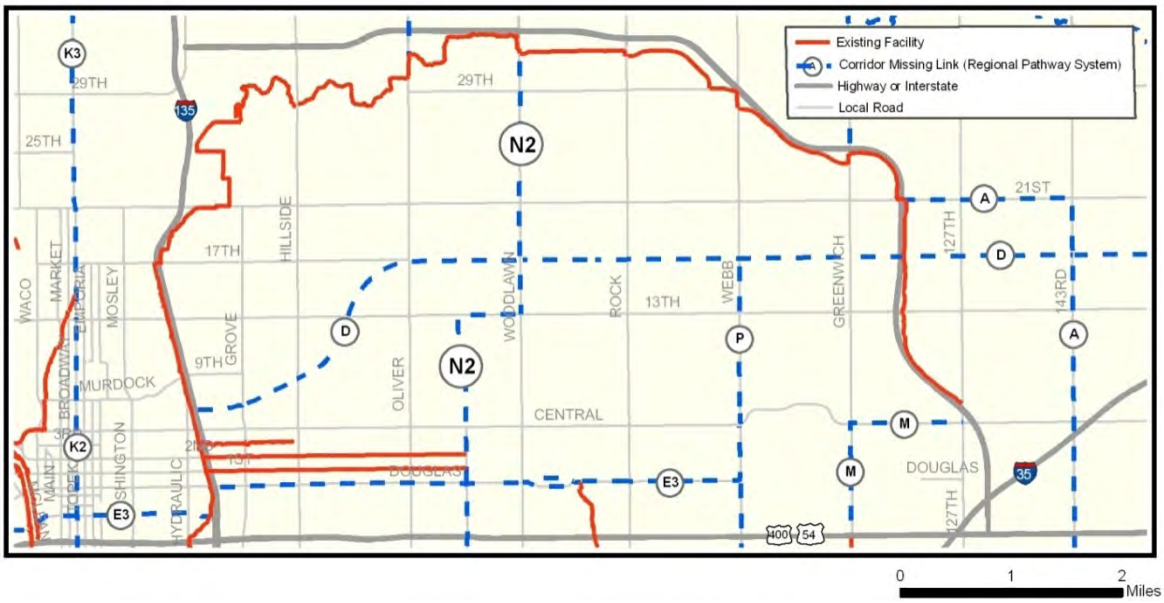
During the 2013 update, the decision needs to be made if both the K1 connection and the new option along the abandoned rail corridor should be included in the plan, if one is more feasible than the other, or if one has a higher priority than the other.

Corridor M: K-96 Extension: Corridor M is part of the 45 mile loop around the City of Wichita. Completion of this loop is one strategy of the Regional Pathway System Plan. A suggestion was made to extend this corridor to the east so that a link to Andover along Central could be established. The following map identifies the proposed connection.



During the 2013 update, the feasibility of this option will be explored.

Corridor N(2): Woodlawn –13th St. N. –Edgemoor: Corridor N is an eight mile segment that uses Edgemoor in the south and jogs over to Woodlawn using 13th Street. The map below identifies the proposed route. A suggestion was made that good route signage would be important to include as part of the improvement to this corridor.



During the 2013 update, it will need to be determined if a reference to good route signage should be included in the corridor description. Additional discussion on route signage for all corridors should also be explored to provide a consistent, reliable pathfinder system for the entire regional pathways system.

Greenway Corridors

Greenway corridors are defined as "*A corridor of undeveloped land, as along a river or between urban centers, which is reserved for recreational use or environmental preservation.*" Development of pathways along these corridors offers a scenic view for those who bike or walk and a fresh break from the urban environment. Corridors H, I, J, and Q are currently identified in the RPSP as Greenways. There are differing concerns with these corridors:

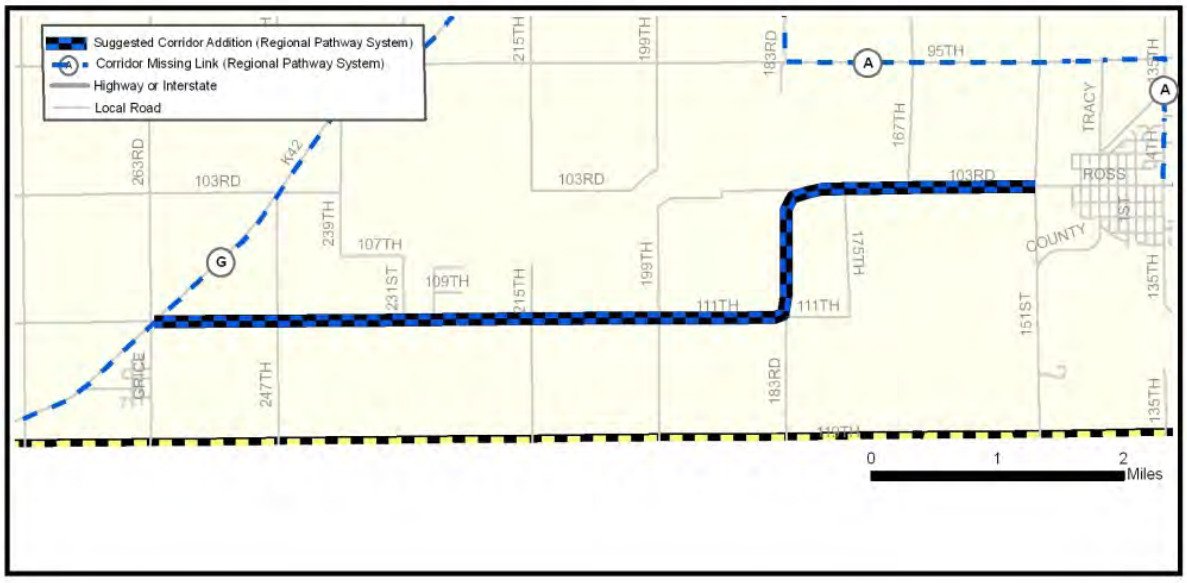
- Property issues or other legal issues that are current and significant barriers to development;
- Obtaining US Corps of Engineers regulatory permits (e.g. environmental, navigation, levy breaches, etc,); and
- These corridors have already been identified as potential pathways in other plans.

Further assessment of these corridors are needed during the next update to determine if the corridors should be split up, omitted, or left as is.

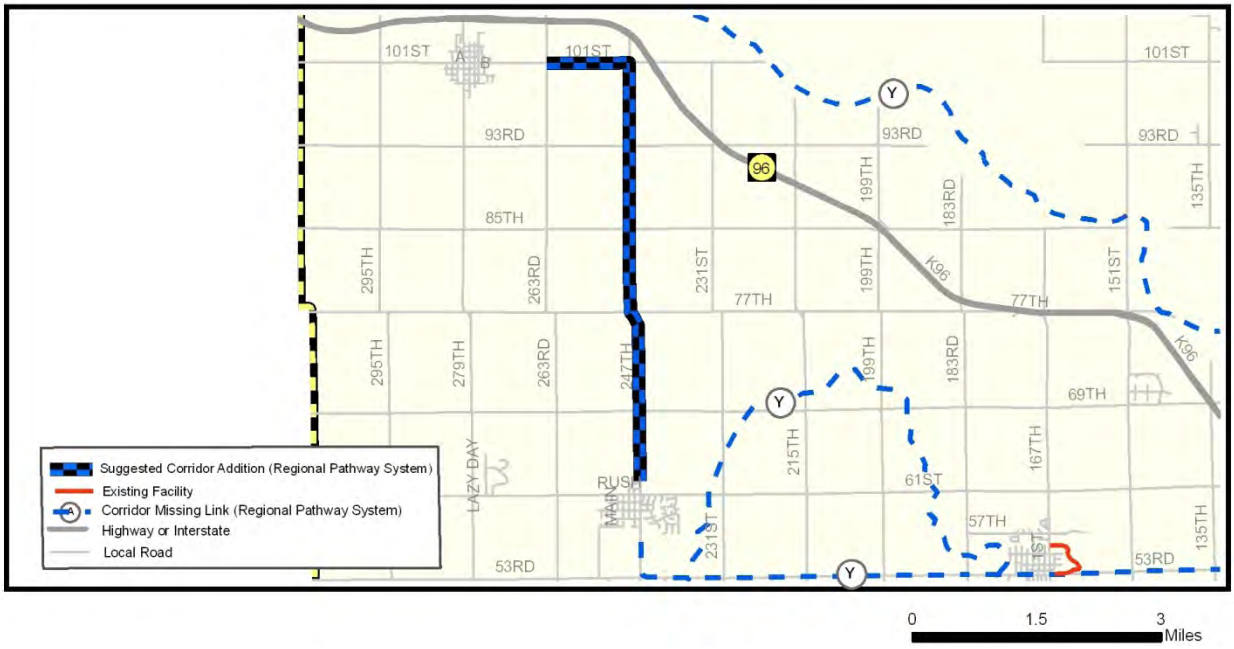
Suggested Corridor Additions

The public and the Project Advisory Group (PAG) also looked at the existing and proposed pathways system and identified several potential additions to the regional plan. These additions will need to be deliberated and reviewed over the next few years. Additional public input and consideration to include any additional corridor, segment, or connection will be sought and incorporated in the Regional Pathway System Plan in 2013. Six potential additions to the regional system that were presented in this update include:

1. Viola / Clearwater Connection: 111th St. from Viola to 183rd St., to 103rd St.

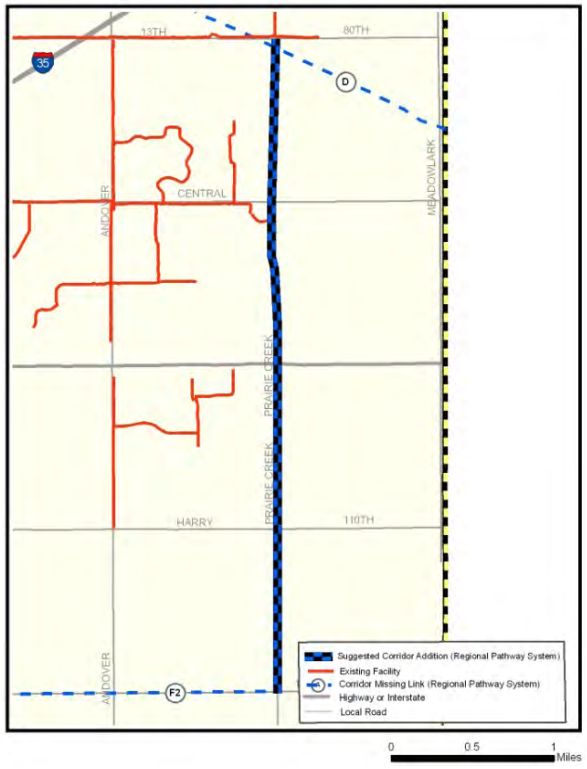


2. Mount Hope / Andale Connection: 247th St. to 101st St.

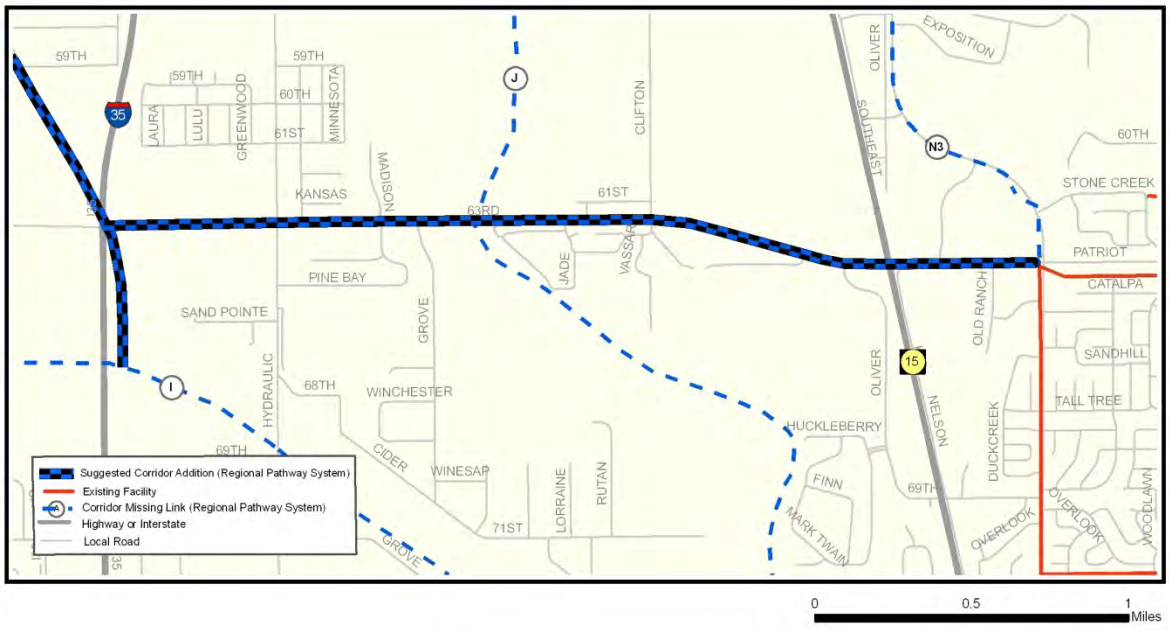


3. Rock Rd: Derby to Wichita.

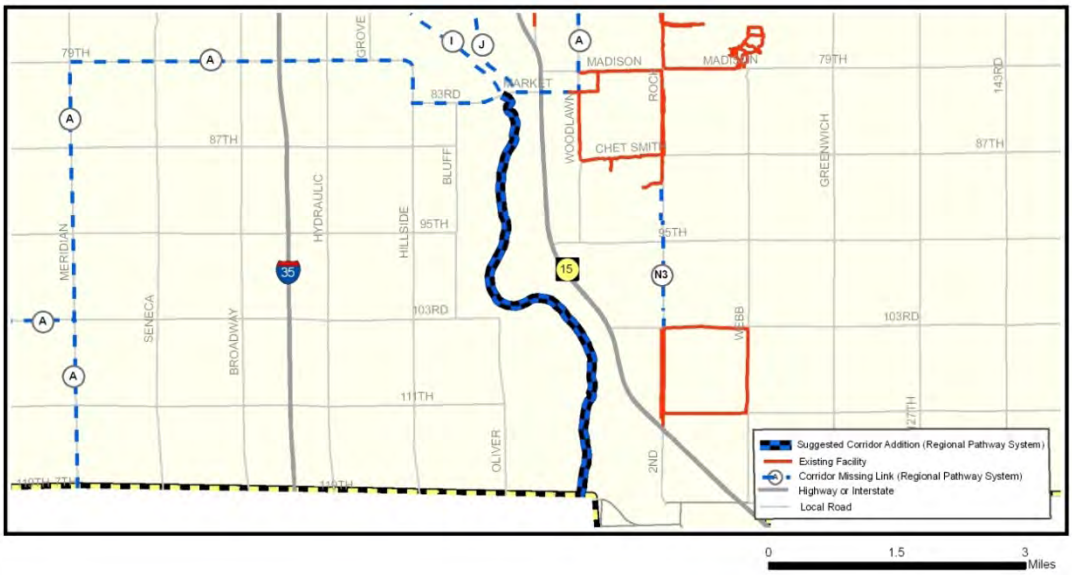
4. Prairie Creek Rd: 13th St. to 120th St.



5. Haysville to Derby Connection along 63rd St.



6. Corridor J along east and west banks of the Arkansas River – 79th St. to Sumner County line



There will need to be continued discussion on including these proposed corridors in the next RPSP update. The type and function of each new route (bike lane, dedicated bike route, signed route, etc.) will need to be discussed. Each new route or corridor will also need to be evaluated for its relative importance and priority to the regional pathway system, and folded into the regional pathways systems currently identified in the Plan.

Consultant Facility Recommendations

This appendix to the WAMPO Regional Pathway System Plan contains the consultant's initial recommendations in 2007 that were removed from the corridor pages during the final plan revision process in 2007. These do not necessarily represent the WAMPO position and do not constitute WAMPO policy. Rather they are based on the professional experience of Charlier Associates, Inc. as national experts specializing in bicycle and pathway planning.

For many of the corridors described in Chapter 3, Charlier Associates made specific recommendations for how jurisdictions in the region may want to implement continuous bicycle accommodation based upon national state-of-the art in bikeway planning. These are presented following as background information for local jurisdictions as they move forward with implementation decisions.

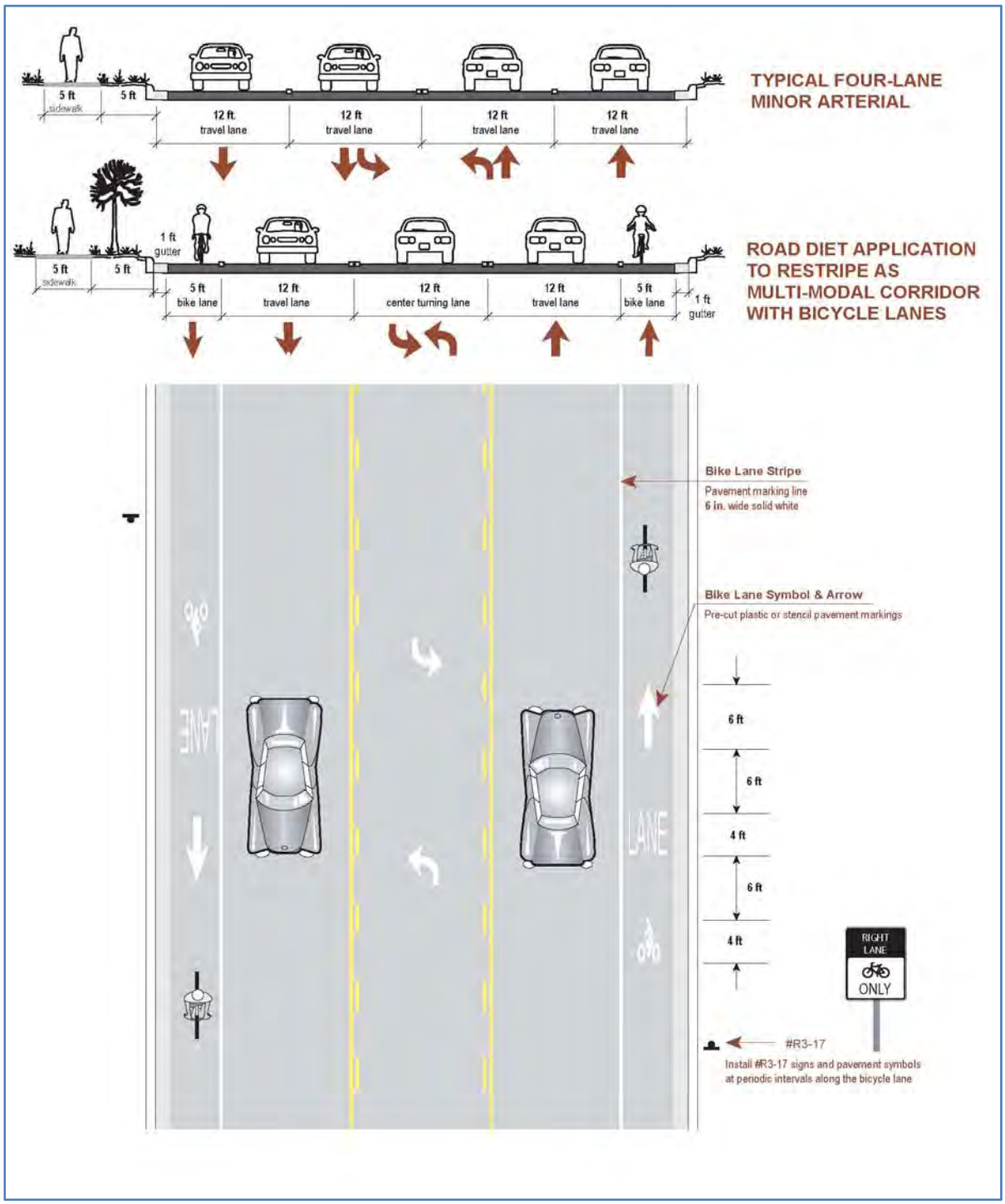
Several of these initial corridor recommendations included implementation of a concept called a "road diet" as presented on the following pages. Nationwide, engineers are putting select roads on "diets", helping them to lose lanes and width — most often by restriping a four-lane roadway into a three-lane. Studies have shown that these "leaner" streets have become safer, more efficient, multi-modal, and more productive. Often, these changed roads set the stage for millions of dollars in new commercial and residential development, spurring neighborhoods to become more robust, vital, and economically sound places.

While cities such as Seattle, Portland, East Lansing, Santa Monica, and Toronto have added road diets to their toolkits for accommodating bicyclists, this success is not guaranteed in all places. Road diet implementation must be paired with a public process that allows adjacent property owners and the general public to become involved in the design decision-making process. Many communities have arrived at consensus that road diets work on streets with 15,000-18,000 average daily traffic (ADT) or less. Conversions up to 23,000 ADT appear to represent the upper limit of effectiveness for a three-lane roadway design. These parameters and details from case study research framed the consultant's recommendations regarding road diets.

Other regional corridors prescribed a variety of facility improvement options depending on land use and style of future growth and development that may occur. This approach is called "context sensitive design" and recognizes that one facility type is not the appropriate solution for all environments. Urban areas are different from suburban and rural areas, and may require different approaches to solving similar problems.

However, most of the approaches suggested following will require local governments to expand their "pathways" planning beyond trails and sidepaths to include a variety of on-road bicycle accommodations as options for complete system development.

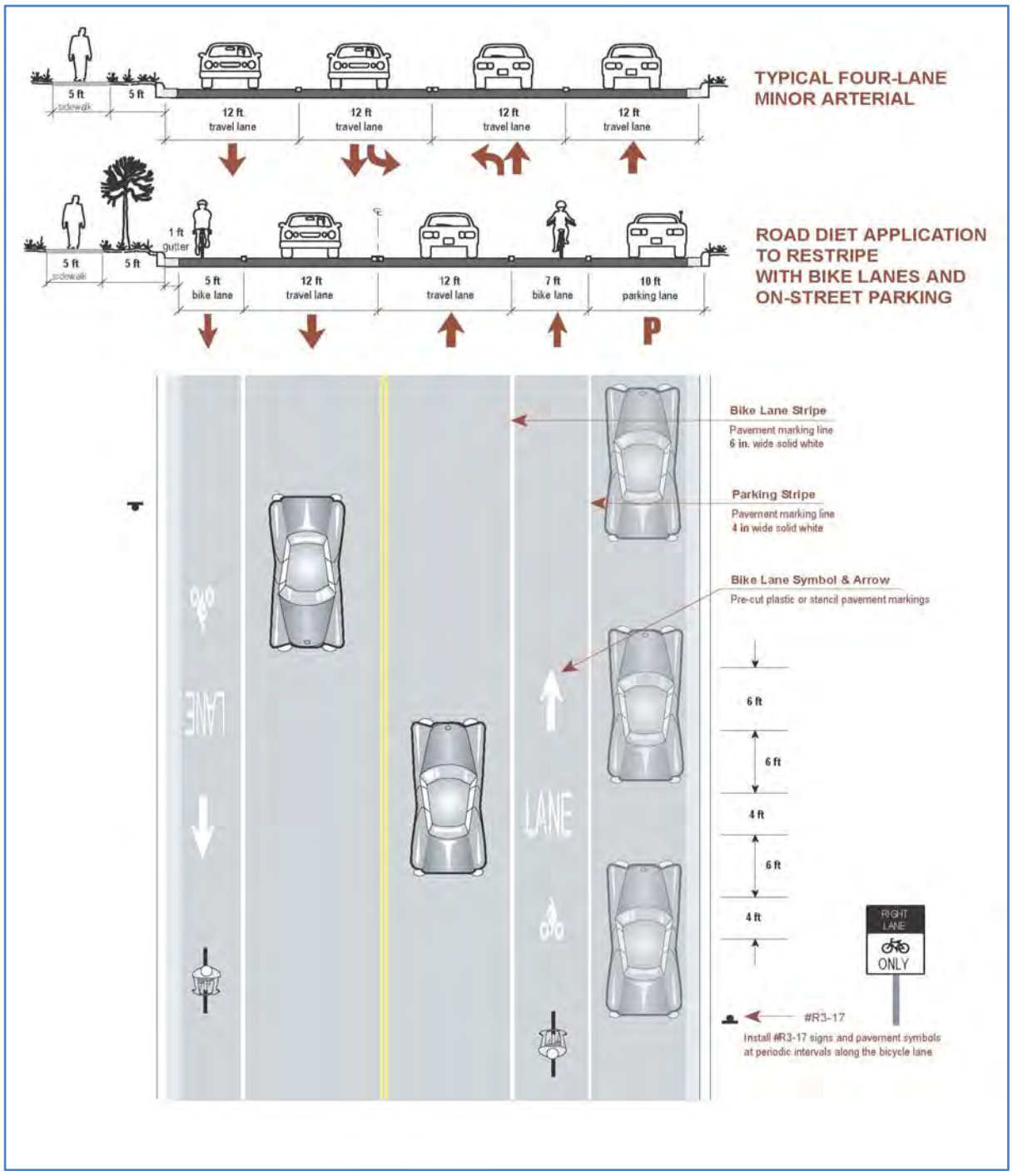
Road Diet with Center Turning Lane



Road Diets and Safety Impacts

The Highway Safety Information System (HSIS) is a multi-state FHWA safety database that contains crash, roadway inventory and traffic volume data. A recent HSIS study of road

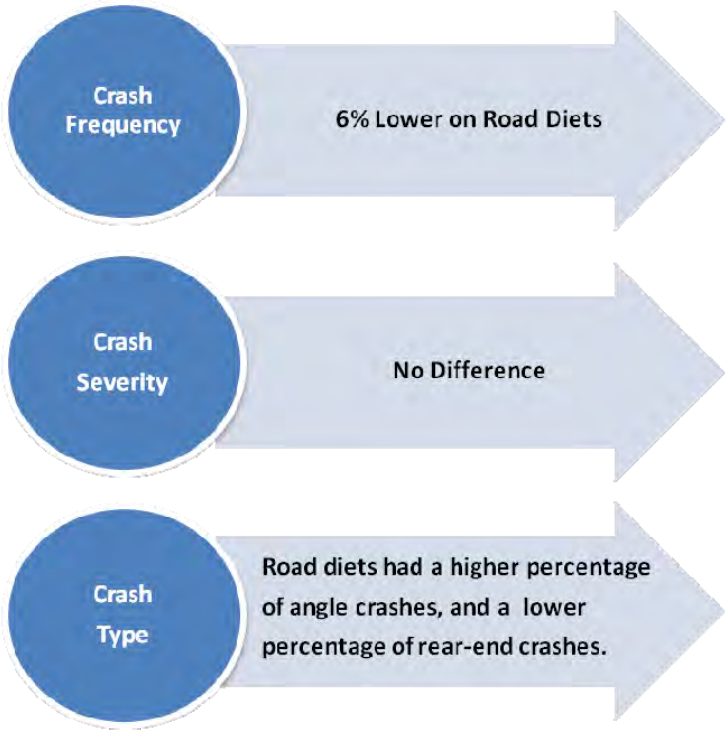
Road Diet with On-Street Parking



diets found that this design treatment offers benefits to both vehicles and pedestrians. This national research was conducted by the University of North Carolina Highway Safety Research Center. See **http://www.tfhrc.gov/safety/hsis/pubs/04082/index.htm** for full details.

In summary, the study found that on a four-lane street, drivers change lanes to pass slower vehicles (such as vehicles stopped in the left lane waiting to make a left turn). In contrast, drivers' speeds on two-lane streets are limited by the speed of the lead vehicle. Thus, road diets may reduce vehicle speeds and vehicle interactions during lane changes, which may reduce the number and severity of vehicle-to-vehicle crashes. Pedestrians may benefit because they have fewer lanes of traffic to cross, and because motor vehicles are likely to be moving more slowly. Space for bicycle lanes may be an added benefit.

Looking at vehicular crashes during before and after testing of road diet conversions, the HSIS study arrived at the following conclusions:



Road Diets and Traffic Capacity Impacts

At first glance, road diets appear to take away two of four travel lanes, therefore traffic volumes must be reduced by half, right? In reality, capacity constraints occur at intersections. The two center lanes of a four-lane street accommodate turning movements with some through traffic. If a road diet includes a center turn lane, vehicular capacity is therefore more or less unaffected as long as attention is paid to intersection design.

Road Diets and Traffic Capacity Impacts

	ADT Before	ADT After
Lake Wash Blvd, Kirkland, WA	23,000	25,913
Lake Wash Blvd, Kirkland, WA	11,000	12,610
Electric Ave, Lewistown, PA	13,000	14,500
Burcham Rd, East Lansing, MI	11-14,000	11-14,000
Grand River, East Lansing, MI	23,000	23,000
St. George St., Toronto, Canada	15,000	15,000
120th Ave, NE, Bellevue, WA	16,900	16,900
Montana, Bellevue, WA	18,500	18,500
Main Street, Santa Monica, CA	20,000	18,000
Danforth, Toronto, Canada	22,000	22,000
Greenwood Ave, Seattle, WA	11,872	11,247
N 45th St, Seattle, WA	19,421	20,274
8th Ave NW, Seattle, WA	10,549	11,858
MLK Jr. Way, Seattle WA	12,336	13,161
Dexter Ave, Seattle, WA	13,606	14,949
24th Ave NW, Seattle, WA	9,727	9,754
Madison St, Seattle, WA	16,969	18,075
W. Government Way, Seattle, WA	12,916	14,286

A comprehensive study by Walkable Communities, Inc. of 18 road diet projects shows that average daily traffic (ADT) volumes before and after lane reductions remained nearly identical. Full details can be found at:

www.walkablecommunities.org

Index of Consultant Corridor Recommendations

Corridor B: 53rd Street North

Future Improvements to the rural roadway design that may occur with growth should include paved shoulders or bicycle lanes, or possibly a sidepath depending on adjacent land development patterns. Roadway improvements, beginning near the Wal-Mart Supercenter site at Meridian, should accommodate bicycles.

Bicycle lanes are appropriate where speeds are less than 35mph on streets with urban curb-and-gutter; a road diet may be implemented on four-lane sections with low traffic volumes; or share-the-road signing may be used on paved shoulder segments to caution drivers that there may be bicyclists on the roadway.

Corridor C: 13th Street North (omitted in final plan)

Road Diet Treatment
Convert this four-lane road with moderate traffic volumes into a three-lane with center turn lane plus bike lanes, with 35mph posted speed limit. Follow AASHTO and MUTCD bicycle lane guidelines for intersection designs to accommodate additional vehicular turning lanes, as needed.

(Note: Corridor C was presented as an alternative to Corridor D. The consultant considered either, or the development of both routes, as viable options for an east/west connection. The Corridor C routing on 13th Street would appeal more to Group A bicyclists, while the Corridor D routing along the abandoned BNSF corridor would appeal more to Group B/C bicyclists. Corridor C was dropped in favor of Corridor D by the local jurisdictions.)

Corridor E: Maple Street

Share-the-Road Signing
Post signs west of Maize Road (sections with a center median or two-lane rural road section)

On-Street Bicycle Lanes
Add bike lanes to other sections by narrowing the center turning lane of the five-lane cross-section, or restriping the four-lane sections into a three-lane with center turn lane plus bike lanes, with 35mph posted speed limit. Follow AASHTO and MUTCD bicycle lane guidelines for intersection designs to accommodate vehicular turning lanes, as needed.
Incorporate continuous bicycle accommodation from Maple, through the developing Arena Neighborhood, to link with Douglas Street to the east.

Corridor E: Douglas Street

Road Diet Treatment
Convert this four-lane road with moderate traffic volumes and frequent drive/street intersections into a three-lane with center turn lane plus bike lanes, with 35mph posted speed limit. Follow AASHTO and MUTCD bicycle lane guidelines for intersection designs to accommodate additional vehicular turning lanes, as needed.

Corridor F: Pawnee Avenue/23rd S.
Accommodations on Pawnee are intended to connect into Mt. Vernon to create a continuous east/west corridor. To make this connection, the following pieces are needed:

Sidepaths
Need a connection from the existing Gypsum Creek Bicycle Path running along the west side of Woodlawn under the Kansas Turnpike/I-35 bridge to connect to Pawnee.
Provide continuous sidepath facilities along Pawnee for the section from Woodlawn to Webb Road.

Shared Roadway
As an interim measure, Share-the-Road signs may be posted on the two-lane roadway section of Pawnee east of S. Webb Road for connection to Andover.
As growth and development continue in this part of the county, provisions for paved shoulders, on-street bicycle lanes, or a sidepath should be made.

Corridor K: Main, Broadway or Topeka

On-Street Bicycle Lanes
As Wichita undergoes redevelopment of the Arena Neighborhood and the greater Downtown, plans include reverting the existing one-way streets back to two-way traffic.

As part of this effort, we are working with the Arena consultants to determine whether Main, Broadway or Topeka will be the best north/south route on which to stripe designated 5-foot bicycle lanes. Our goal is for a continuous facility that runs beyond the Arena study area north to 13th Street and south to MacArthur. AASHTO and MUTCD guidelines for intersection designs shall be followed to accommodate vehicular turning needs at select locations where needed.

Topeka is the current preferred alternative.
From Pawnee south, Broadway is the only option that connects to and crosses the Arkansas River to provide trail system linkage.

Corridor N : Oliver Street

Road Diet
Convert this four-lane street with moderate traffic volumes and frequent drive/street intersections into a three-lane with center turn lanes plus bike lanes, with 35mph posted speed limit. Apply treatment from K-96 south to the Kansas Turnpike.

Continue accommodation north of K-96 into Bel Aire and Kechi as either bike lanes or paved shoulders. South of the Kansas Turnpike to Spirit Aerosystems may be on-street or a multi-use path.

(Note: recommendations now route on Woodlawn, 13th, and Edgemoor as an alternative to using the Oliver corridor, with facility type to be determined by the local jurisdiction.)